

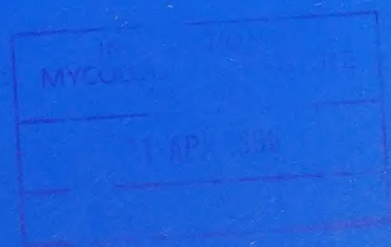
ISSN 0951-0621

Biodeterioration Abstracts

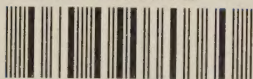
A World Abstracts Journal covering the fields of
Materials and Environmental biodeterioration
and Biodegradation of Wastes

1995 Volume 9 Annual Indexes

Includes List of Source Journals



CAB INTERNATIONAL



00201451



CAB INTERNATIONAL



CAB INTERNATIONAL

Wallingford, Oxon OX10 8DE, UK

Telephone: Wallingford (01491) 832111

Telex: 847964 (COMAGG G) Fax: (01491) 833508

Telecom Gold/International Dialcom: 84: CAU001

Biodeterioration Abstracts

is a quarterly journal prepared from the CAB ABSTRACTS database
by the Natural Resources And Forestry Department of the DIVISION OF
PLANT SCIENCES AND NATURAL RESOURCES.

Editor

L. Connor BSc, DipInfSc, MInfSc

Assistant Editor

W.J. Reid BSc

Reviews Editor

Mrs H.M. Minter MA, MSc

Editorial Consultant

Dr. D. Allsopp PhD, CBiol, FIBiol, MInfSc
CABI Biodiversity Co-ordinator
International Mycological Institute, Bakeham Lane,
Egham, Surrey, TW20 9TY, UK

For details of the whole range of CAB INTERNATIONAL publications and services see back cover.

Orders and enquiries concerning current subscriptions and back numbers of this journal should be sent to the Marketing and Distribution Services at the above address.

Disclaimer

The information contained herein, including any expression of opinion and any projection or forecast, has been obtained from or is based upon sources believed by us to be reliable but is not guaranteed as to accuracy or completeness. The information is supplied without obligation and on the understanding that any person who acts upon it or otherwise changes his/her position in reliance thereon does so entirely at his/her own risk.

CAB INTERNATIONAL does not accept responsibility for any trade advertisement included in this publication.

Biodeterioration Abstracts

Volume 9

INTERNATIONAL
MYCOLOGICAL INSTITUTE
LIBRARY

11 APR 1996



CAB INTERNATIONAL

Prepared by

CAB INTERNATIONAL
DIVISION OF PLANT SCIENCES AND NATURAL RESOURCES

1995

ISSN 0951-0621

© CAB INTERNATIONAL, 1996

All rights reserved. No part of this publication may be reproduced in any form or by any means, electronically, mechanically, by photocopying, recording or otherwise, without the prior permission of the copyright owner.

published by

CAB INTERNATIONAL
Wallingford
Oxon OX10 8DE UK

The information contained herein, including any expression of opinion and any projection or forecast, has been obtained from or is based upon sources believed by us to be reliable but is not guaranteed as to accuracy or completeness. The information is supplied without obligation and on the understanding that any person who acts upon it or otherwise changes his/her position in reliance thereon does so entirely at his/her own risk.

printed by

Cambrian Printers, Aberystwyth

Biodeterioration
Abstracts

Contents
Volume 9

Biodeterioration – general	9	129	265	385
Legislation and standardization	9	129	265	385
Education, training and information	–	–	–	–
Health, hygiene and pathogens	9	129	265	385
Analysis and sampling	10	130	267	388
Potable water	11	131	269	394
Foodstuffs – general	11	132	270	396
Animal feeds	16	136	276	399
Carbohydrates	–	137	–	–
Grain and pulses	17	137	277	399
Flour and bakery products	18	138	278	400
Sugar and confectionery products	18	138	–	400
Oilseeds, nuts and vegetable oils	18	138	279	400
Coffee, cocoa and tea	19	138	279	–
Tobacco	–	139	–	–
Spices and culinary herbs	19	139	279	401
Sauces, dressings, soups	19	139	279	–
Beverages	19	139	280	401
Fruit and vegetable juices	19	140	281	401
Prepared foods and salads	20	140	281	401
Processed and canned foods.....	20	140	281	402
Horticultural produce	21	140	281	402
Fish and seafood	22	142	283	402
Meat and meat products	23	145	285	404
Poultry and eggs	26	149	289	407
Dairy products	27	152	292	408
Non–foodstuffs	30	153	294	408
Animal protein	30	–	–	–
Plant fibres	–	153	294	408
Timber	30	153	294	409
Paper, works of art, museum specimens.....	32	–	295	409
Textiles	–	153	–	–
Hydrocarbons, fuels and lubricants	32	–	–	410
Plastic polymers	–	153	296	410
Pharmaceuticals and cosmetics	33	154	296	410
Paint and surface coatings	33	–	296	410

Metals	33	154	296	410
Stone and concrete	33	154	296	410
Glass	—	—	—	411
Constructions	33	155	298	411
Fouling	34	—	299	414
Control	35	156	299	414
Preservation (physical)	35	156	300	414
Preservation (chemical)	36	157	301	415
Disinfection	36	158	302	416
Biological control	37	159	303	419
Biodeterioration organisms	38	161	305	420
Environmental pollution	42	167	310	426
Water pollution	42	167	310	426
Freshwater pollution	43	167	310	426
Marine pollution	43	168	311	428
Air pollution	43	—	312	429
Soil pollution	44	170	312	429
Biodegradation – general	44	170	312	429
Legislation and standardization	44	170	312	429
Economics and information	44	170	—	429
Hygiene and pathogens	44	170	312	429
Analysis and sampling	45	171	313	431
Pollution control	46	171	315	434
Bioremediation	47	172	315	4344
Water pollution	47	172	315	364
Soil pollution	48	172	316	374
Air pollution.....	49	173	—	39
Biological waste treatment	49	173	317	439
Aerobic treatment.....	50	177	318	440
Anaerobic treatment.....	51	179	318	442
Composting	52	181	319	443
Biological filtration	54	184	321	445
Activated sludge treatment.....	55	186	323	446
Ponds, lagoons, oxidation ditches,wetlands	58	191	324	449
Anaerobic digestion.....	59	196	325	450
Rotating disc system.....	62	197	327	451
Equipment	62	198	327	452
Waste recycling and disposal (biological aspects)	63	198	328	452
Disposal to natural waters	—	198	328	452
Fish farming	63	198	328	453

Hydroponics	—	—	—	453
Land treatment and irrigation	63	198	328	453
Landfill	63	198	328	454
Feedstuffs	—	198	328	—
Biological upgrading to feedstuffs	63	199	328	454
Biological upgrading – other	64	199	330	455
Materials recovery	66	200	331	456
Water re-use	66	—	331	456
Energy generation	66	200	331	456
Specific waste materials and compounds	68	201	332	457
Organic compounds – general	68	201	332	458
Cellulosic and lignocellulosic material	73	206	341	471
Petroleum wastes	77	209	345	475
Hydrocarbons	77	210	345	476
Phenols	80	214	349	480
Lipids	83	216	352	484
Synthetic polymers	83	216	353	485
Natural polymers and carbohydrates	83	217	354	485
Biocides	83	218	354	486
Material protectants	84	218	—	—
Agricultural biocides	85	218	354	486
Fertilizers	86	—	355	—
Alcohols	87	219	355	489
Detergents	87	219	355	489
Heavy metals	87	220	356	491
Radioactive materials	89	—	358	494
Other	89	222	358	494
Specific industries	94	230	362	504
Food industry	94	231	362	504
Fermentation industry	95	232	362	505
Canneries	—	232	—	—
Dairies	96	232	363	505
Sugar industry	96	233	363	506
Pharmaceutical industry	98	233	—	—
Chemical industry	98	233	364	506
Wood preservation and biocide industries	—	235	—	507
Paint and coatings industries	—	—	—	507
Pulp and paper industries	98	235	364	507
Textile industry	99	241	366	507
Tanneries	—	242	366	508
Laundries	—	—	—	—
Water treatment	100	242	366	508
Rubber and plastics industries	100	244	366	—
Mining industry	100	244	366	509
Coal and coke industries	101	244	367	510
Metal and engineering industries	—	244	367	510
Power generation	—	—	368	511

Agriculture	101	244	368	511
Animal wastes	101	244	368	511
Cattle waste	102	244	368	511
Pig waste	102	244	368	511
Poultry waste	102	246	369	512
Silage	102	—	369	512
Municipal wastes	103	246	369	512
Abattoirs	—	247	370	513
Biodegradation organisms	104	247	371	513
Microbiological techniques	110	254	379	523
Reports	111	—	—	—
Conferences	111	257	381	525
Books	111	257	381	525
AUTHOR INDEX	527			
SUBJECT INDEX	555			
List of source journals	i			

REVIEW ARTICLES

VOLUME 9

The role of 'iron bacteria' in the biodegradation of minerals By D.B. Johnson.....	1
Biodeterioration of archaeological wood By R.A. Blanchette	113
Mycotoxins in foods, feeds and pastures By M.O. Moss	259

BIODETERIORATION ABSTRACTS

READER'S GUIDE

Biodeterioration Abstracts is compiled from the CAB ABSTRACTS database, and includes occasional review articles on topics of importance.

It provides a quarterly survey of the more important recent world literature on the biodeterioration of the environment (environmental pollution by living organisms), materials, artefacts or facilities of economic importance (including foodstuffs, timber, fuels, construction materials, etc.) and on biodegradation of waste materials to less objectionable, more easily disposable or higher-value products by living organisms.

Less obvious topics covered include the biofouling of structures and materials; desulfurization of coal; the extraction of metal ores by microbiological methods; the biodegradation of environmentally hazardous chemicals; and the adsorption of heavy metals by microorganisms.

Biodeterioration Abstracts comprises 2 main parts - Biodeterioration and Biodegradation, with sections on microbiological techniques, reports, conferences and books spanning both.

Serial publications, including other abstracting journals, together with miscellaneous publications and books are scanned. Each year, material from over 500 journals is abstracted. An effort is made to note all new data; previously published information, well known facts and popular articles may be omitted. Some background papers are given very brief notices, and some of local or marginal interest are cited by titles only.

When consulting an entry the reader should remember that the title is an integral part of the abstract and may include data necessary for its full comprehension.

In a typical citation the name(s) of the author(s) are followed by the title of the paper in English. If the paper is written in a language other than English, the English translation of the title is enclosed in square brackets. The title in the original language, if not English, follows, except for Arabic, Chinese, Japanese, or languages in the Cyrillic script, etc. Journal titles are next given in unabbreviated form. The year of issue, in round brackets, the volume number, part number in round brackets, the first and last page numbers of the article complete the basic citation.

Supplementary details given in square brackets include the language of the paper and the language of any summary or summaries in languages other than that of the paper; and there may also be included the number of references. The affiliation of the first author is usually given.

HOW TO USE *BIODETERIORATION ABSTRACTS*

Records can be scanned using the **CONTENTS** page or traced via the **INDEX**.

SCANNING ABSTRACTS USING THE **CONTENTS PAGE**

In the **Biodeterioration** section the records are arranged wherever feasible under the substrate heading, e.g. spices, meat, dairy products, paint. More general records on, e.g. food storage, mycotoxins, food infestation or legislation will be found under **FOODSTUFFS, GENERAL** or **BIODETERIORATION, GENERAL**. Records more specifically about techniques, control or biodeterioration organisms than the substrates are found under those more relevant headings. **ENVIRONMENTAL POLLUTION** has been positioned at the end of this section and includes biodeterioration of the environment by organisms (ie algal blooms caused by eutrophication, pathogens, biological wastes). The reader will find cross-references here to papers on the biodegradation of environmental pollutants which have been included under the relevant heading in the **Biodegradation** section.

In the **Biodegradation** section records are placed in the section most relevant to the subject, e.g. substrate being degraded, specific industry from which the treated waste is derived, type of treatment or biodegradation organism.

Where the record is relevant to other sections it is cross-referenced hence "See also" references under the main or sub-heading should also be consulted.

SEARCHING VIA THE **INDEXES**

Subject Index

Specific topics within the record are indexed. Records can be traced, for example, via the:

substrate or type of waste, e.g. onions, meat, marine structures, timbers, logs, textiles, cattle manure, cellulosic wastes

organism e.g. rodents, *Thiobacillus ferrooxidans*, *Eichhornia crassipes*

biological treatment, e.g. anaerobic digestion; composting

country etc. where relevant, e.g. France; Latin America; Asia

chemicals or **biocides** whether used for control, as a biodegradable substrate or as a useful product of biodegradation.

Where appropriate, records are also indexed under **books, reviews, conferences**, etc.

Author Index

All authors of each paper are indexed alphabetically by surname. Variants of surname are also indexed.

A COPY OF MOST OF THE ORIGINAL ITEMS may be obtained by using the CAB INTERNATIONAL Document Delivery Service. A form is usually printed in each issue.

LIST OF JOURNALS CITED

The annual indexes now include an alphabetical list of all journals cited during the year.

COMMENTS FROM USERS are always welcome.

Please write to Liza Connor, Biodeterioration Abstracts, Soils Department, Division of Natural Resources, Forestry and Economics, CAB INTERNATIONAL, Wallingford, Oxon OX10 8DE, UK.

INTERNATIONAL MYCOLOGICAL INSTITUTE

An Institute of CAB INTERNATIONAL

Bakeham Lane, Egham, Surrey TW20 9TY, UK

Tel: (01784) 470 111 (International +44 784 470 111)

Telecom Gold/Dialcom: 84: CAU009

Telex: 9312102252 MI G

Email: CABI-IMI@CGNET.COM

Fax: (01784) 470 909 (International +44 784 470 909)

Director: Professor D. L. Hawksworth, PhD, DSc, FLS, CBiol, FIBiol

Service Heads:

Biosystematic & Identification Services:

Genetic Resources & External Services:

Plant Protection Services:

Biochemical & Molecular Biology Services:

Computing & Library Services:

Administrative & Training Services:

B. C. Sutton, PhD, DSc

D. Allsopp, PhD, CBiol, FIBiol, MInfSc

J. M. Waller, MA, PhD, DipAgSci, CBiol, MIBiol

P. D. Bridge, PhD

P. M. Kirk, PhD

E. M. Aitchison, MA

The International Mycological Institute (IMI), with a staff of about 65 and an annual budget of £1.9m, is the largest centre concerned with systematic mycology in the world. Founded in 1920, the Institute has from the first provided world services to mycologists and workers in related disciplines, particularly plant pathology, medical and veterinary mycology, and now also in industrial mycology, biodeterioration, biodiversity and biotechnology.

Biosystematic & Identification Services

Correct diagnosis of the cause of a disease, spoilage, or industrial problem is the first step in finding an appropriate solution. IMI provides a reliable, up-to-date identification service for about 4500 cultures and specimens each year, received from a wide variety of sources.

Staff are involved in wide-ranging research programmes on microfungal systematics. They produce about 70 scientific papers each year and also compile the *Dictionary of the Fungi*, *Index of Fungi*, *Bibliography of Systematic Mycology*, *Systema Ascomycetum*, *Descriptions of Fungi and Bacteria*, *Distribution Maps of Plant Diseases*, *Mycological Papers* and *Phytopathological Papers*.

Information on the submission of material and details of charges are available on request.

Genetic Resources Reference Collection

This Collection, which incorporates the UK National Collection of Fungus Cultures, maintains over 17,000 strains; it is one of the largest service collections for fungus cultures in the world. Plant bacteria and yeasts are also maintained.

Cultures are available for sale world-wide for industrial, scientific and educational use, and metabolic and physiological data on the strains held are actively added to the collection's databank.

The 10th edition of the Catalogue is available free of charge and lists over 11,000 strains available from the open collection. Additions to the collection are welcome, especially of fungi otherwise not represented in the collection or of biochemical, economic and industrial importance.

The Collection is recognized as an International Depository Authority for patent strains of fungi and bacteria under the terms of the Budapest Treaty.

Training Services

IMI offers a wide variety of training activities, ranging from postgraduate research degrees to one-day specialist seminars. Each year about eight longer courses, including an annual six-week International Course on the Identification of Fungi of Agricultural Importance, are held.

Overseas workshops, individual training and tuition for mycologists, plant pathologists and industrial staff are also arranged. Visiting research scientists are welcome to spend time at the Institute as part of their research work.

Plant Protection Services

The Institute's Plant Protection Laboratory incorporates the UK Overseas Development Administration Plant Pathology Liaison Unit. Backed by the expertise and information available within IMI, it provides disease diagnosis, technical support, and consultancy services for agricultural scientists, advisers, growers and shippers worldwide. Research is also undertaken, primarily on specific problems relating to pathogen variability and characterization.

Further details

Please write, fax or telephone for our current Services and Publications booklet and any further information on specific services that you may require. All work is carried out by IMI on a confidential basis, and we will be pleased to discuss your individual requirements without obligation.

Consultancy & Contract Services

IMI is able to undertake consultancy assignments involving surveys of disease or other problems, and offers consultancy and contract research in any of its fields of activity. Staff can also assist in the preparation of mycological publications on a contract basis.

Industrial & Environmental Laboratory

The laboratory is accredited under the UK National Measurement Accreditation Service (NAMAS) and carries out a wide variety of industrial testing, contract research and consultancies involving non-food materials. Services involving organisms other than fungi can also be arranged, and a tropical testing facility is available.

Yeast Investigations Laboratory

A specialist laboratory, headed by Professor R. R. Davenport, has been established in IMI. It provides consultancy, investigatory contract research and training facilities related to specific needs of the food and beverage industries, both in the UK and overseas.

Food Investigation

IMI's long-standing involvement in the food industry is now focussed through its Food Group, covering filamentous fungi, yeasts and bacteria. We offer producers, processors, manufacturers and distributors a comprehensive, confidential, microbiological service, including on-site investigations and training. For information resources, IMI has access to the International Food Information Service (IFIS).

Biochemistry & Molecular Biology Services

The Biochemistry & Molecular Biology Laboratory acts as a service unit within the Institute for routine and project work. Techniques currently available include detection and screening of fungal enzymes and secondary metabolites (including mycotoxins) and a number of methods for characterizing strains and taxa at a molecular level.

Bacteriology Laboratory

The laboratory offers a specialist identification service for plant pathogenic, biocontrol and industrially significant bacteria. Techniques currently available include quantitative fatty acid analysis, physiological test methods and molecular techniques involving the polymerase chain reaction (PCR).

Information

The IMI library holds a unique collection of literature on plant pathology, fungal systematics, medical and veterinary mycology, biodeterioration and fungal biotechnology. Its stocks consist of approximately 750 current journals, 7,000 volumes and books and 140,000 reprints.

Literature searches and studies can be carried out to specific individual requirements, and a photocopy service is also available to provide copies of original source literature.

AUTHOR INDEX

- Aa, K. 2707
 Aabo, S. 852
 Aarsman, C. J. M. 2090
 Aarts, H. J. M. 259
 Ababouch, L. H. 1033, 1048, 1882
 Abad, F. X. 3065
 Abadias, M. 2950
 Abarca, M. L. 2927
 Abasaeed, A. E. 3322
 Abazinge, M. D. A. 758
 Abbaszadegan, M. 1071, 2773, 2776, 2869, 3067
 Abd-Alla, M. H. 113, 554, 625, 1522, 1592
 Abdel-Fattah, M. 1475
 Abdel-Hafez, A. I. I. 88
 Abdel-Hameed, M. S. 2339
 Abdel-Mallek, A. Y. 3006
 Abdel-Sater, M. A. 83, 912
 Abdelkader, G. 2323
 Abdu, H. M. 2367
 Abdul Hamid, S. N. 1885
 Abdul Karim, M. I. 1984
 Abdul-Raouf, U. M. 882, 1949
 Abdul Samah, O. 1984
 Abdullah, B. 2046
 Abdullah, F. 3232
 Abe, A. 278
 Abe, K. 1141
 Abe, N. 2642
 Abedajo, L. O. 898
 Abee, T. 3082
 Abeliovich, A. 2507, 3198, 3771
 Abeyta, C., Jr. 1846
 Abielovich, A. 1690
 Abis, L. 2106
 Abler, L. A. 2152
 Ablett, R. F. 44, 975, 1068
 Abliitt, T. 1485
 Abou Hamed, N. A. A. 458
 Aboutboul, Y. 3714
 Abouzied, M. M. 1961
 Abraham, G. 877
 Abramson, D. 2926
 Abreu da Silva, A. 2010
 Abu-ghararah, Z. H. 228
 Abu-Ghararah, Z. H. 2324
 Abu-Harfeil, N. 1884
 Abu-Hilal, A. H. 1138
 Abu-Ruwaida, A. S. 2068, 2074
 Abumoghli, I. 1656
 Acar, Y. B. 3244
 Acevedo, C. 1442
 Acher, A. J. 227
 Achi, O. K. 519, 1755
 Achkari-Begdouri, A. 759
 Ackermann, H. W. 3088
 Ackerson, M. D. 1400
 Acomb, C. J. 3192
 Acuff, G. R. 135, 2044
 Adachi, K. 221, 2176
 Adamczak, M. 2681
 Adamietz, E. 1728
 Adams, A. M. 940
 Adams, C. E. 865
 Adams, J. C. 2787, 3907
 Adams, M. W. W. 2614, 3679
 Adams, P. R. 3604
 Adams, W. W. 1802
 Adanin, V. M. 1517
 Adcock, P. W. 1341
 Addison, C. J. 1078
 Addleman, K. 3779
 Adebajo, L. O. 269, 905, 934, 955
 Adegoke, G. O. 903, 1926
 Adeoye, G. O. 355
 Adesanya, O. O. 905
 Adesiyun, A. A. 2051
 Adhikari, D. K. 2500
 Adhikari, H. R. 1037
 Adin, A. 2904, 3032
 Adisa, A. 902
 Adler, N. 512
 Adriaens, P. 1486
 Adrian, D. D. 712
 Æsøy, A. 1619, 3732
 Afşar, H. 2588
 Afschar, A. S. 479
 Agathos, S. N. 3536
 Agatzini, S. 1418
 Agblevor, F. A. 1477
 Agostinho, P. 858
 Agrawal, P. K. 713
 Agrawal, R. 469
 Aguilar, A. 489
 Aguilera, L. E. 1761
 Aguirre, C. 814
 Agustin, A. I. 89
 Agustin, G. S. 3374
 Aharoni, A. 3389, 3709
 Ahearn, D. G. 1542, 2126, 3020, 3023
 Ahel, M. 635
 Ahmad, D. 790
 Ahmad, M. H. 992
 Ahmed, A. M. 2539, 2971
 Ahmed, A. U. 1143
 Ahmed, M. 1965
 Ahmed, M. A. 2189
 Ahmed, M. T. 3335
 Ahonen, H. E. 1029
 Ahning, B. K. 299, 763, 1383, 1501, 1774, 2352, 2530, 2724, 3350, 3469
 Ahtiainen, J. 3134
 Aiken, B. S. 2252
 Ait-Abdelkader, N. 3479
 Aitken, M. D. 1209, 1499, 1535, 2545
 Aja-Nwachukwu, J. 79
 Ajay Singh 3515
 Ajello, L. 1542
 Ajit Singh 1474
 Ajith-Kumar, P. V. 2396
 Ak, N. O. 837, 1053
 Akagawa-Matsushita, M. 2353
 Akangbou, T. S. 3571
 Akanni, A. O. 903
 Akçin, G. 2588
 Akiba, S. 2762
 Akimenko, V. K. 3477
 Al-Ani, M. Y. 450
 Al-Asheh, S. 1401
 Al-Awadhi, N. 3232
 Al-Bader, D. 1483
 Al-Baharna, B. S. 1490
 Al-Dababseh, B. A. 100
 Al-Daher, R. 460
 Al-Ghusain, I. 2275
 Al-Ghusain, I. A. 336, 1265, 1611
 Al-Hamd, M. F. S. 2013
 Al-Hasan, R. H. 1483, 2502
 Al-Kassim, L. 584
 Al-Layla, R. I. 1270
 Al-Makhlafi, H. 3107
 Al-Mohizea, I. S. 150
 Al-Mutaari, N. 1537
 Al-Othman, H. A. 2074
 Al-Shahwani, M. F. 450
 Al-Shalhat, A. 150
 Al-Shayji, Y. A. 460
 Al-Sheddy, I. A. 2983
 Al-Sulami, A. A. 2872
 Al-Tae, A. M. R. 2872
 Al-Tayyar, T. A. 2325
 Al-Yousef, A. K. 1270
 Alaeddinoglu, N. G. 2571
 Alaerts, G. J. 1215, 3259, 3788, 3824
 Alam, S. I. 2241
 Alatalo, L. J. 1161
 Alba, J. 2533
 Albagnac, G. 1995
 Albert, R. H. 1959
 Albertson, O. E. 1653, 2249, 2311
 Albertsson, A. C. 1544, 1548
 Albo, S. 203
 Albrecht, J. A. 907
 Alcala, M. 2087
 Alchanati, I. 3844
 Aldom, J. E. 1852
 Aldrich, H. C. 3860
 Aleem, M. I. H. 748
 Alef, K. 2814
 Aleksic, S. 1910
 Aleksic, S. 22
 Alexander, M. 510, 576, 1163, 1438, 1519, 2562, 3401, 3462, 3560, 3572
 Alexander, R. A. 1245
 Alexiou, I. E. 1672
 Alfonso, A. 943
 Alfredsson, G. A. 1080
 Alhonnäki, K. 3683
 Ali, G. R. R. 1918
 Ali, T. A. 1554
 Ali, Z. M. 2872
 Ali-Abdullah, J. H. 3260
 Ali-Abdullah, T. H. 3260
 Alic, M. 3883
 Alieva, R. M. 3769
 Alimon, H. 1984
 Allard, A. 3188
 Alleman, B. C. 3575
 Alleman, J. E. 3878
 Allen, D. G. 1513, 1732, 2417
 Allen, E. R. 1667
 Allen, J. L. 1122
 Allen, N. 366
 Allen, P. 2981-2982
 Allen, R. D. 2875
 Allen, S. B. 881
 Allen, V. G. 758
 Allen-King, R. M. 575
 Allievi, L. 1140
 Allison, N. 2662
 Allman, R. 1893
 Allmann, M. 884
 Allsopp, D. 1012
 Almeida, M. T. 3024
 Almeida, R. M. A. 2934
 Almendros, G. 2113
 Almond, J. 1042
 Almond, J. S. 2960
 Alon, R. N. 786
 Alongi, D. M. 1610
 Alonso, J. L. 265
 Alonso, M. A. 265
 Alonso, V. 482, 551, 700, 703, 707, 1382, 1668
 Alphenaar, P. A. 426
 Alsina, M. 1087, 2187
 Altenschmidt, U. 1448
 Altinbas, U. 3782
 Altobelli, S. 1174
 Alur, M. D. 1887
 Alvarez, A. J. 2861, 3190
 Alvarez, C. I. V. 739
 Alvarez, P. J. J. 2529
 Alvarez-Cohen, L. 1209, 2400
 Alves, M. N. 2856, 3030
 Aly, F. H. 765
 Alzamora, S. M. 2003, 3055
 Ama, A. A. 1046
 Amador, J. A. 2451
 Amaguana, R. M. 2870
 Amann, E. 2779
 Amann, R. 400, 1155, 2254, 2847
 Amann, R. I. 2703
 Amano, Y. 546
 Amerio, G. P. 2019
 Amerlynck, P. 3536
 Amici, S. 2906
 Amigó, J. M. 1842
 Amils, R. 3185
 Amin, A. 2065
 Amiot, M. J. 216
 Amirmozafari, N. 2915
 Amit Banerjee 664
 Ammar, M. S. 193, 1949
 Amoros, I. 265
 Amory, A. 2892
 Amos, K. M. 511, 526
 Amrhein, C. 648
 Amund, O. O. 3571
 An, Y. H. 3011
 Anand, R. C. 1762
 Anand, S. K. 2066, 2909
 Anantheswaran, R. C. 2987
 Anbe, Y. 3753
 Anchad, M. 2940
 Andel, E. F. 1351
 Andel, J. G. van 573
 Ander, P. 2482
 Anderl J. G. van 3508
 Andersen, K. L. 2620
 Andersen, R. 1708
 Andersen, S. J. 2060
 Andersen, S. R. 3043
 Andersom, J. M. 3797
 Anderson, A. 1429
 Anderson, A. J. 743
 Anderson, B. C. 3351
 Anderson, D. M. 2222
 Anderson, G. K. 433, 701, 1672, 3343, 3762
 Anderson, H. 319
 Anderson, J. W. 29
 Anderson, P. R. 1582
 Anderson, S. 1720
 Anderson, A. 3118
 Andersson, B. 1262, 3704
 Andersson, J. T. 1496
 Anderton, A. 15
 Ando, Y. 2859
 Andrade, M. C. 2631
 Andrade-Maldonado, G. del R. 2375
 Andrassy, É. 1871
 Andre, M. 2826
 Andreadakis, A. D. 1651, 1862
 Andreesen, J. R. 1800
 Andreoni, V. 1476
 Andres, Y. 3690
 Andrew, P. W. 3124
 Andrews, J. F. 1179
 Andrews, S. A. 2296
 Andrews, W. H. 1930, 2870
 Ang, P. Y. 921
 Angelidaki, I. 3350
 Angelini, P. 266
 Angelis, F. de 1131
 Angelo, R. 814
 Angelov, A. 2381
 Angioni, A. 2573
 Angle, J. S. 1164
 Anikas, M. S. 3360
 Anikis, M. S. 3363
 Anjali Mathur 1412
 Anjana Sharma 2671
 Anjos, A. C. dos 2978
 Anke, H. 2517
 Ankumah, R. O. 3628
 Annachhatre, A. P. 3816
 Annadotter, H. 2901, 3339
 Ante, A. 410
 Antillón, F. 2828
 Antipova, I. A. 571
 Anton, L. 3518
 Antonini, G. 3569
 Anuj Goel 2568
 Anuradha Gadkari 2778
 Aoi, T. 443
 Aono, R. 3601
 Apajalahti, J. H. A. 2543
 Aparicio, P. J. 2723
 Appaiah, K. A. A. 3622, 3902
 Applegate, B. M. 3235
 Apte, S. C. 3125, 3194
 Aquihuatl, M. A. 1402

- Aquiáhuatl, M. de los A. 2415
 Arad, S. 2569
 Aragno, M. 792
 Arai, M. 2383, 2766
 Arai, S. 1141
 Araki, K. 3738
 Araki, N. 1187
 Aramouni, F. M. 1982
 Arana, I. 2005
 Araújo-jorge, T. C. 199-200
 Arous, A. 3375
 Arcangeli, J. P. 1507, 2461
 Archana, A. 809
 Archer, D. B. 3509
 Archibald, F. 2726, 3779
 Archibald, F. S. 3778
 Arendt, E. K. 244
 Arfi, R. 1398
 Argaiz, A. 3055
 Argaman, Y. 3309-3311
 Argoudelis, L. 2048
 Arhin, F. F. 802
 Arias, M. L. 2097, 2828
 Arijio, S. 492
 Ariño, X. 196, 2118, 2122, 2124
 Arling, V. 1891
 Armenante, P. M. 597, 2425, 2433, 2546, 2556, 3374, 3584
 Armfield, S. J. 3434
 Armiger, W. B. 2619
 Armistead, C. R. 1549
 Armon, R. 2722, 2898, 3163, 3368, 3790
 Armstead, E. R. 2441
 Armstrong, D. J. 947
 Armstrong, S. M. 598
 Arnau, J. 972
 Arnold, R. G. 1024, 3115, 3436
 Aronstein, B. N. 1552, 3449, 3572
 Arp, D. J. 2456, 3483
 Arquiga, M. C. 2678
 Arranz Santamarta, A. 101
 Arroyo, G. 1909, 2034, 2780
 Arroyo, I. 1909
 Arroyo, J. A. 2034, 2780
 Arthur, M. 1057
 Artolozaga, I. 1069
 Arumugaswamy, R. K. 1885, 1918
 Arundel, J. 3912
 Arunwanich, P. 772
 Arvin, E. 2521
 Arvin, E. 1507, 2461, 2503, 3145
 Arviv, R. 3714
 Asakawa, M. 2030
 Asakura, S. 2437
 Asano, T. 340, 3909
 Ascencio, F. 2183
 Ascension Munoz, M. 435
 Asevedo, I. G. 2934
 Asgari, N. 2571
 Ashbell, G. 2689, 3811
 Ashbolt, N. J. 2188, 2832, 3138, 3150
 Ashley, R. M. 3175
 Ashok Patil 713
 Aslan, B. 3839
 Aspé, E. 1761
 Aspegren, H. 3704
 Asperger, H. 166
 Aspergren, H. 1262
 Asplund, K. 986
 Asquieri, E. R. 1784
 Asturias, J. A. 1533
 Atalaya, A. 2366
 Athanasopoulos, N. 1408, 3890
 Athey, P. 316
 Atlas, R. M. 559, 3204, 3544
 Atmar, R. L. 2958
 Atomi, H. 504, 2514
 Atrih, A. 261, 2172-2173
 Attwell, R. W. 1877
 Atun, G. 2583
 Aubert, S. 216
 Audic, J. M. 617, 1301, 1632
 Audije, M. B. R. 2756
 Augoustinos, M. T. 3904
 Augusta, J. 606, 2564
 Augustin, J. 580
 Augustin, J. 1506
 Aukrust, T. 3863
 Aulicino, F. A. 235, 3891
 Auling, G. 2439, 2542, 3421, 3836
 Aust, S. D. 271, 306-307, 3205
 Austermann-Haun, U. 1222, 1224
 Autenrieth, R. L. 1529, 3450
 Avery, S. M. 962, 2199
 Avery, S. V. 612, 2262, 3676
 Avilés, M. 3155
 Awasthi, S. K. 2561
 Axelsson, L. 3863
 Aydin, A. 723
 Aydin, M. E. 3787
 Ayers, J. G. 1012
 Aylen, G. I. 428
 Aytekin, C. 2142
 Azachi, M. 3471
 Azcona-Olivera, J. I. 1961
 Aziz, K. M. S. 2966
 Aziz, M. A. 1427
 Azov, Y. 3368
 Azrieli, A. 2689, 3811
 Azúa, I. 1069
 Baackmann, C. 1258
 Baars-Lorist, C. 3019
 Baba, T. 3901
 Babcock, R. W., Jr. 566
 Babel, W. 1524
 Babic, I. 216
 Babji, A. S. 1945
 Babkin, V. A. 571
 Babu, G. R. V. 1601, 2441
 Babu, K. S. 2396
 Babuchowski, A. 1813
 Babut, M. 2443
 Baca, M. T. 2480
 Bacchiocchi, I. 2964-2965
 Bachofen, R. 792
 Background Report - European Communities Commission 287
 Badali, C. 578
 Badard, M. 1183
 Badot, R. 1183
 Badr, S. 2338
 Bae, B. H. 1529, 3450
 Bae, B. U. 3814
 Bae, W. 2395
 Bae ByungUk 3814
 Baeyens, W. 3827
 Baez, L. A. 2041
 Bagaeva, T. V. 776, 3825
 Bagby, M. O. 1428, 2438, 3831
 Baggerman, W. I. 33
 Bagi, L. K. 1105, 2819
 Bahadir, M. 1157
 Bahgat, M. 3338
 Bahgat, M. M. M. 3335
 Bai, R. K. 3359, 3391
 Bai, R. P. 3390
 Baigori, M. D. 2783
 Bailey, A. D. 1218, 1286
 Bailey, J. S. 2992
 Bailey, M. J. 535
 Baillie, P. W. 1670
 Baintner, F. 2690
 Baird, L. 2155
 Baird-Parker, A. C. 1931
 Bajpai, P. 2661
 Bajpal, P. K. 2661
 Bak, F. 2399, 3445, 3692
 Baka, Z. A. M. 897
 Bakboord, J. 3472
 Baker, A. J. M. 1164, 3672
 Baker, B. 3858
 Baker, J. M. 1952
 Baker, J. O. 3914
 Baker, P. B. 3434
 Baker, R. S. 317
 Baker, S. C. 658
 Bakhy, K. 2940
 Bakke, R. 1178
 Bakketun, A. 3832
 Bala, G. A. 2385
 Balajee, S. 631
 Balasubramanian, P. R. 3359
 Balasubramanian, S. 3365
 Balasubramanyam, B. V. 229
 Balasubramnian, R. 2785
 Baláz, Š. 2414, 2466-2467
 Balderson, R. K. 321
 Baldev Singh 713
 Baldi, F. 3664
 Bale, J. A. 1793
 Bale, M. J. 3027
 Balebona, M. C. 3139
 Balech, E. 2222
 Baleiras Couto, M. M. 2750
 Bales, M. 1346
 Bales, R. C. 3115, 3147
 Baleux, B. 294, 331, 3169
 Balis, C. 2790
 Balkwill, D. L. 3183
 Ball, A. S. 1482, 1825
 Ball, L. M. 2545
 Ballay, D. 3909
 Balley, D. 340
 Balsamo, D. D. D. 1318
 Baltzis, B. C. 572, 2624
 Bamelis, D. R. 749, 2674
 Bamgbelu, O. A. 898
 Ban, N. 2134
 Ban, S. 1636
 Banat, I. M. 1138, 2578
 Bánáti, D. 1871, 2985
 Bandeira, M. da G. A. 2234
 Bandler, R. 939
 Bandyopadhyay, S. 3231
 Banerjee, A. 500, 664
 Banerjee, D. K. 323, 3459
 Banerjee, S. 809, 2105
 Banerji, S. K. 334
 Bang, D. Y. 1393
 Bang, S. S. 633
 Banka, S. N. 713
 Banks, C. J. 436, 696, 700, 1380, 1421, 1668, 2289, 2533, 2632, 2640, 2645, 2697-2699, 3817-3818
 Banks, M. K. 2518
 Bao, W. 2759
 Bao, X. Z. 3854
 Bar, R. 3470
 Barak, Z. 2569
 Barany, F. 30
 Baranyi, J. 3126
 Baratti, J. C. 3479
 Barbarulo, M. V. 1131
 Barber, C. 3222
 Barbieri, B. 2046
 Barbosa, W. B. 255, 2974
 Barbosa-Cánovas, G. V. 55, 874, 3078
 Barbusiński, K. 3325
 Barcina, I. 1069
 Barclay, C. D. 1510
 Barclay, S. J. 1446, 1739
 Bardhan, S. 1584
 Bardos, P. 325
 Barefoot, S. F. 1063, 2009
 Bargale, P. C. 2935
 Baristiran, A. 3782
 Bark, D. H. 913
 Barker, J. F. 575, 3403
 Barker, P. S. 403
 Barlaz, M. A. 2245, 2696
 Barletta, B. J. 55
 Barnes, S. 3291
 Barnhart, H. M. 2240
 Baroon, Z. H. 2068
 Barr, D. P. 271, 307, 3205
 Barr, S. 1913
 Barracosa, P. 3024
 Barré, R. 2167
 Barres, O. 3793
 Barriault, D. 790
 Barriga, M. I. 2973
 Barrios, M. J. 2088
 Barriuso, E. 3533
 Barron, N. 1466, 3385, 3530
 Barrow, P. A. 151
 Barry, D. A. J. 2230
 Bars, J. le 2930
 Bars, P. le 2930
 Bartha, R. 572, 3237, 3495, 3674
 Bartlett, F. M. 999
 Bartlett, J. G. 1900
 Bartley, C. B. 881
 Bartnicki, E. W. 1498
 Bartocha, W. 3165
 Barton, D. A. 1706
 Barton, L. L. 1584, 3655
 Basappa, S. C. 469
 Baselli, B. 3774
 Basil, J. A. 2362
 Basílico, J. C. 80
 Baskaran, K. 1622
 Baskunov, B. P. 1561, 3769
 Bassetti, A. 2692
 Bastuk, W. 2356
 Bateman, B. 3071
 Batish, V. K. 157
 Batt, C. A. 30, 1904, 2881
 Battaglia, F. 1754, 2670
 Battersby, N. S. 1485
 Battigelli, D. A. 3069
 Battistella, M. 2079
 Baud-Grasset, S. 2251
 Bauda, P. 3312
 Bauer, E. 530
 Bauer, I. 560
 Bauer, M. C. 2080
 Baumann, P. 3741
 Baumann, U. 1740, 3644-3645
 Baumbach, R. 2542
 Baumgart, J. 1899
 Baumgärtl, H. 1494
 Baumgartner, T. 3617
 Bautista, D. A. 153, 2989
 Bavor, H. J. 1336, 1351, 1861
 Bawcom, D. W. 2038
 Bayer, E. A. 1789
 Bayliss, A. J. 3103
 Bayly, R. C. 3693, 3830
 Bayramoğlu, M. 1328
 Beaman, B. L. 1317
 Pearce, B. 1241
 Beard, G. A. 1951
 Beardall, J. 62
 Beattie, J. C. 2050
 Beattie, L. 1790
 Beaubien, A. 3723
 Beauchemin, D. 1158
 Beaudeau, P. 861
 Beaudet, R. 2538
 Beaulieu, C. 803
 Beaulieu, N. D. 1897
 Beauman, J. 304
 Beauman, J. A. 1459, 2244
 Bécares, E. 411
 Beccaria, A. 80
 Becel, P. 2017
 Bech-Anderson, J. 1120
 Bechard, J. 2006
 Beck, M. B. 2328
 Becker, B. 215, 2175
 Becker, D. 2542
 Becker, H. 167
 Becker, L. A. 1428
 Becker, P. M. 3209
 Becker, S. 1794
 Bedford, W. K. 579
 Bedient, P. B. 3226
 Bednarski, W. 2681
 Bedwell, M. 1902
 Bedzyk, L. A. 778
 Beech, I. B. 3052
 Beeh, J. 940
 Beekma, I. 662
 Beelen, P. van 277
 Beer, D. de 741, 2742
 Beer, W. 2211
 Behki, R. 3619
 Beil, S. 3641
 Beimfohr, C. 2847
 Beisel, W. R. 889
 Bej, A. K. 2961
 Bek, P. A. 1348
 Bekhouche, F. 1830
 Beldman, G. 2951
 Belemli, A. 2057
 Beliveau, C. M. 125
 Belkin, S. 1690, 2507, 3198, 3771
 Bell, C. 159
 Bell, R. G. 949, 3167-3168
 Bell, R. W. 3332
 Bella, F. A. di 2356, 2356

- Bellahcen, D. 3723
 Bellemare, G. 791
 Beller, H. R. 3542
 Bellucci, C. 3891
 Belosevic, M. 2824
 Belsner, N. O. 1452
 Belyaev, S. S. 3404
 Belyaeva, M. I. 776
 Benckiser, G. 3329
 Bender, J. 3224, 3652
 Bendt, T. 303
 Benedict, R. C. 2849
 Benefield, L. D. 1487
 Benemann, J. R. 2679
 Bengsch, H. 1849
 Bengtsson, L. 2593
 Benická, E. 2414, 2466
 Benitez, E. 1612
 Benitez, F. 483, 752
 Benka-Coker, M. O. 3143
 Benkhemmar, O. 97
 Benndorf, J. 1804
 Bennett, A. R. 2043
 Bennett, D. 3057
 Bennett, P. M. 3027
 Bennett, R. W. 57
 Bennoit, H. 404
 Benoit, L. 2718
 Benoit, P. 3533
 Benoit, V. 56
 Benoit-Guyod, J. L. 3582
 Benson, J. T. 306
 Benson, R. F. 1110
 Bentem, A. G. N. van 1776
 Bentham, R. H. 2158
 Benthin, S. 1808
 Bentzen, G. 3057
 Benzoni, G. 3761
 Berdagué, J. L. 147
 Berešiková, Z. 2623
 Berg, J. 139
 Berg, M. van de 1942
 Berg, R. van den 3412
 Berg, S. 204
 Bergbauer, M. 1731
 Bergdoll, M. S. 1950
 Berge, E. 3358
 Berger, E. 1987
 Bergeron, H. 2708, 3549
 Bergeron, J. 790
 Berglund, M. 1702
 Bergquist, P. L. 1831
 Bergstein-Ben Dan, T. 3506
 Beril, C. 2864
 Beringer, J. E. 3027
 Berkowitz, B. 3805
 Bermúdez Savon, R. C. 1422
 Berna, J. L. 3639
 Bernagozzi, M. 1102
 Bernal, P. 2233
 Bernard, C. 1261
 Bernard, D. 864
 Bernardes, T. D. 1470
 Bernardi, P. de 867
 Bernardo, A. 2194
 Bernasconi, S. 1476
 Bernet, N. 2625
 Berrang, M. E. 2992
 Berry, T. M. 938
 Berthelin, J. 3793
 Bertoldi, M. de 1255, 2790
 Bertrand, J. C. 495
 Besche, H. U. 410
 Bestetti, G. 568, 1476
 Bethoney, C. M. 1534, 2463
 Betts, G. D. 2141
 Betts, R. P. 1928, 2043
 Betts, W. B. 2394, 2531
 Beuchat, L. R. 882, 1031, 1065, 1943, 1949, 1994, 2007, 2067, 2145, 2156, 2202, 2204, 2945, 2977
 Beumer, R. R. 292, 2837
 Beurskens, J. E. M. 3435, 3442
 Beutling, D. 2963
 Beveridge, T. J. 3658
 Beveridge, T. J. 1113, 2672, 3656, 3660, 3792
 Bewtra, J. K. 584
 Beyenal, H. 1805
 Beyer, A. de 560
 Bezalel, L. 3834
 Bezkorovainy, A. 1067
 Bhalla, T. C. 2371, 2487
 Bhamidimarri, R. 340, 3909
 Bhat, K. M. 1790
 Bhat, M. A. 618
 Bhat, M. K. 540, 1472
 Bhat, S. 540
 Bhatia, M. C. 1412
 Bhatnagar, D. 2858, 2929
 Bhatnagar, L. 2453
 Bhatt, N. M. 1687
 Bhattacharya, S. K. 599, 2737, 3231, 3271, 3661
 Bhattacharyya, D. 748
 Bhattacharjee, J. W. 1915, 1917, 2227
 Bhatti, A. R. 41
 Bhatti, T. M. 816
 Bhatti, Z. I. 3269
 Bhosle, N. B. 3042
 Bianchi, A. 991
 Bianchi, D. 568
 Bianchi, R. 1652
 Bianco, S. 1983
 Bianucci, F. 1102
 Bickerton, L. E. 1158
 Biegert, T. 2528
 Bielecki, J. 3097
 Bielek, P. 2414, 2466
 Bienkowski, P. R. 3565
 Bigham, J. M. 3686, 3688
 Bigot, B. 1267
 Biguzzi, M. 2139
 Bilanin, M. 1678
 Bilanovic, D. 477
 Bilbao, A. 1990
 Bilgili, S. F. 997
 Billcliffe, B. 1901
 Billore, S. K. 1368
 Bily, J. 1575
 Binder, H. 702
 Binner, E. 3293
 BioCycle 360, 375, 420, 1236, 2304, 3243, 3295
 Birkeland, S. E. 3863
 Birkenhead, D. 1870
 Birou, B. 1263
 Bis, F. X. 2084
 Bisailon, J. G. 2538
 Bisaria, V. S. 1462
 Bisbini, P. 1102
 Bischof, F. 1778
 Bishop, P. 1280
 Bishop, P. L. 330, 441, 1176, 1189, 1216, 1597, 2251, 2284, 2652
 Bissonnette, G. 1241
 Biswas, N. 584
 Biswas, P. 1745, 1748, 3273-3274
 Bitton, G. 262, 392
 Bize, J. 2273
 Bizeau, C. 2625
 Bizri, J. N. 98
 Bjerre, H. L. 3362
 Bjurman, J. 3004
 Black, E. K. 838
 Black, S. F. 854
 Blackall, L. L. 1300, 3743
 Blackburn, C. de W. 37, 883
 Blackburn, E. 621, 1747
 Blair, I. S. 137, 957-958, 995, 2981-2982
 Blais, B. W. 2883, 3897
 Blais, J. F. 640, 661
 Blake, C. K. 3505
 Blake, P. A. 2013
 Blake, R. C. 1584
 Blake, R. C. II 3655
 Blanch, A. R. 1087, 2187
 Blanchard, K. 2265
 Blanchet, D. 2523
 Blanchette, R. A. 186, 624, 2099
 Blanchfield, B. 1922
 Blanco, A. 2727
 Blanco, D. 89
 Blanco, J. L. 1947
 Blanco-Varela, M. T. 196
 Blank, W. 503
 Blankenship, L. C. 979, 2992
 Blasco, R. 2723
 Blatchley, E. R. 305, 1055
 Blaut, M. 1798
 Blazquez, R. 2317
 Bleicher, K. 471
 Blessing, R. L. 1151
 Bliss, P. J. 1609
 Blissett, S. J. 901
 Block, J. C. 2443, 2557, 3321, 3657
 Blois, S. de 2736
 Blom, H. 3863
 Blonda, M. 690
 Bloomfield, S. F. 1020, 1057
 Bloor, J. C. 3762
 Bluestain, R. L. 1090
 Bluestein, R. L. 1054
 Blyssick-McKenna, D. 2085
 Board, R. G. 52, 127, 914, 1989, 2053, 2200, 2799, 2980
 Boardman, G. D. 3266, 3757
 Bochem, H. P. 804
 Bock, E. 2633
 Bock, M. 1688
 Bockemühl, J. 22
 Böcker, G. 3610
 Böcker, K. 1616
 Bodik, I. 3718
 Bodsworth, N. J. 1957
 Boehler, E. 1743
 Boelens, J. 2300
 Boenke, A. 899
 Boer, A. P. N. de 1796
 Boer, A. S. de 919
 Boer, C. E. de 3009
 Boer, E. de 156
 Boer, J. de 3708
 Boero, V. J. 329
 Boethling, R. S. 304, 1459, 2244
 Bogan, B. W. 3467
 Bogdan, B. 1744
 Bøgebjerg, P. 1629
 Bøgh, Ø. J. 2643
 Boher, S. 2969
 Bohm, B. 3739
 Bois, F. 2557
 Boisen, F. 17
 Boivin, R. 791
 Bokassa, I. P. 2381
 Bokhamy, M. 512
 Bolan, N. S. 755, 1770
 Boldin, M. 3036
 Boley, F. 1315
 Bolier, G. 3788
 Bollag, J. M. 593, 1431, 2261
 Bollmer, M. 1205, 1615
 Bolletta, G. 2964
 Bolliger, S. 1944
 Bolotina, N. P. 2744
 Bolsen, K. K. 2689
 Bolton, K. J. 901
 Boman, B. 1702
 Bompeix, G. 97
 Bonapasta, R. A. 2836
 Bonch-Osmolovskaya, E. A. 3682
 Bond, P. L. 3743
 Bonet, R. 3671
 Bongaerts, J. 1794
 Boni, L. 2014
 Bonilla-Salinas, M. 3129
 Bonin, P. 495
 Bonnefoy, V. 1100
 Bonnen, A. M. 3518
 Bonner, J. S. 1529, 3450
 Bont, J. A. M. de 2522, 3251, 3561
 Bonte, A. W. 2495
 Bonting, C. F. C. 3578
 Bontema, J. 3689
 Boominathan, K. 3783
 Boon, P. I. 2479
 Boone, D. R. 3396, 3509
 Boonstra, J. 3708
 Boopathy, R. 527, 567, 1500
 Booth, I. W. 15
 Borch, E. 147
 Bordalo, A. A. 18
 Bordons, A. 3407, 3420
 Borghi, M. del 3742
 Bories, A. 667, 1455
 Borja, R. 436, 482, 551, 696, 700, 703, 707, 1380, 1382, 1421, 1668, 2289, 2533, 2640, 2645, 2697-2699, 3817-3818
 Borodin, V. I. 750
 Boronin, A. M. 3564
 Borović, A. 161
 Borrego, J. J. 435, 492, 3139
 Bors, J. 894
 Bortone, G. 1652
 Borzacconi, L. 1671
 Bos, P. 2732
 Bosch, A. 2826, 3065
 Bosco, F. 1185
 Bosecker, K. 1688
 Bosetti, A. 1855
 Bosi, E. 2062
 Botana, A. M. 943
 Botana, L. M. 943
 Botella, M. S. 265
 Bothast, R. J. 2567
 Bott, T. L. 2181
 Bockemühl, J. 22
 Bottero, J. Y. 2443, 3321
 Bottoms, J. D. 1951
 Bottoni, P. 3156
 Botzenhart, K. 2863, 3073
 Boubekri, C. 97
 Boucabelle, C. 667
 Bouchard, D. D. 2224
 Bouchez, M. 2523
 Bouchriti, N. 2786, 2957
 Boucquoy, J. B. 3536
 Boudra, H. 2930
 Boufa, P. 26
 Bougle, D. L. 181
 Bouillanne, C. 3855
 Bouilloud, P. 516
 Boulanger, C. A. 2853
 Bouquartacha, F. 1033, 1048
 Bourbigot, M. M. 3268
 Bourbonnais, R. 3520, 3778
 Bourdeau, P. 2022
 Bourguin, F. P. 742
 Boussatta, H. 2032
 Boutaib, R. 2957
 Bouten, W. 3225
 Boutros, S. N. 2890
 Bouvy, M. 1398
 Bouwer, E. 3201
 Bouzas, J. 116
 Bouzoubaa, K. 416
 Bovill, R. A. 849
 Bowden, D. J. 3796
 Bowen, B. 878, 917, 1891
 Bowers, A. R. 3586
 Bowles, B. L. 1032
 Bowman, J. P. 2716, 3487, 3565
 Bowmer, K. H. 1346
 Bowser, P. A. 2511
 Box, A. T. A. 2774
 Boxall, R. A. 1976, 2932
 Boyd, B. 1306
 Boyd, G. 222, 1875, 3059
 Boyd, P. 20
 Boyden, B. H. 2680
 Boyle, A. W. 3505
 Boyle, C. D. 3590
 Boyle, J. J. 3627
 Brackett, K. A. 2251
 Brackett, R. E. 66, 264, 961, 1031, 1964, 2145, 2202, 2977
 Brade, H. 892
 Bradford, M. L. 2322
 Bradford, S. M. 1071, 3255
 Bradley, J. A. 2045
 Brady, A. J. 600
 Brady, D. 644, 646, 807, 1586, 3667
 Brady, J. M. 3669
 Bragg, J. R. 3544
 Brahic, G. 2213
 Brainard, J. R. 1576
 Bramwell, S. A. 3887
 Brands, E. 406
 Brandt, E. V. 2754
 Branion, R. M. R. 1721
 Braun, R. 530

- Braxton, D. S. 3103
 Brazil, G. M. 3439
 Brea, M. T. R. 1213
 Brebberrmann, D. 3475
 Breccia, J. D. 2783
 Breeman, A. N. van 3788
 Breen, P. F. 1342
 Breitenbeck, G. A. 2265
 Bremer, P. 3475
 Brenchley, J. E. 1707
 Brenes, M. 929
 Brenner, A. 1690, 3198, 3771
 Brenner, D. J. 1110
 Brenner, R. C. 2695
 Brenner, V. 3489
 Brent, J. 2947
 Breton, A. 1830
 Breuer, G. M. 2885
 Breuer-Jammali, M. 1491
 Breuil, C. 808, 2102, 2105
 Breukelen, F. T. 1776
 Breure, A. M. 573, 3508
 Brewer, J. F. 2858
 Brewer, M. S. 2048
 Brezny, R. 1442
 Bridge, P. D. 2215
 Bridgwater, A. V. 2812
 Brigham, J. 3602
 Brigmon, R. L. 262, 1818
 Brignal, W. J. 380
 Brignall, W. J. 3785
 Brinch, P. P. 1606
 Brink, B. ten 1061, 2781
 Brink, D. E. 726, 1689
 Brink, N. 379
 Brinton, R. 3285
 Brinton, R. B. 367
 Brinton, W. F. 367
 Brinton, W. F., Jr. 2297, 3171
 Brischke, K. V. 382
 Brisset, P. 1301
 Britten, M. 3383
 Britz, T. J. 144, 432, 697, 2646
 Brix, H. 1338
 Broadaway, S. C. 2131
 Broadbent, C. R. 2158
 Broadmeadow, A. 919
 Broberg, P. J. 824
 Broch-Due, A. 1708, 1725
 Brocklehurst, T. F. 1076, 1880-1881, 2192
 Brockman, F. J. 2442
 Broda, P. 2749, 3874
 Brodribb, F. 2917
 Brønd, S. 685, 1628
 Brooker, B. 3098
 Brookes, P. R. 337
 Brookins, A. M. 1850
 Brooks, M. H. 3719
 Broome, S. W. 1349
 Brosch, R. 3112, 3114
 Brouns, T. M. 1579
 Brousseau, P. 3227
 Brousseau, R. 2708
 Brousseau, R. 3549
 Brouwer, H. 408
 Brown, D. 1371
 Brown, D. E. 3691
 Brown, D. L. 2105
 Brown, D. S. 1365
 Brown, J. A. 3883
 Brown, J. E. 53
 Brown, M. R. W. 3826
 Brown, R. 1537
 Brown, R. L. 1974
 Brown, R. V. 3812
 Brown, S. L. 1164
 Browne, K. F. 99
 Brözel, V. S. 1028, 2133
 Bruagulat, M. R. 2927
 Bruce, M. 1720
 Bruce, V. R. 1930
 Bruchmann, M. 1986
 Brundaban Panigrahy 1771
 Brunetti, A. 690
 Brunner, G. 1223
 Bruno, M. 1131
 Bruno, M. E. C. 3087
 Brunsbach, F. R. 499, 1505, 3460
 Brury, W. J. 3866
 Brusseau, M. L. 3623
 Bruus, J. H. 1288
 Bruyne, T. de 61
 Bryan, F. L. 2069
 Bryant, C. W. 1705
 Bryant, J. 1025, 2052
 Bryant, J. L. 913, 1933
 Bryant, L. J. 3797
 Bryant, M. P. 2684
 Brydon, L. 2203
 Bryniok, D. 3490
 Brzezinski, R. 803
 Brzozowski, D. 664
 Bsai, N. 30, 2881
 Bubert, A. 12
 Bubner, M. 602
 Buchanan, I. 442
 Buchanan, R. L. 34, 239, 242, 847, 957-958, 1047, 1105, 2819, 2849, 3104
 Buchert, J. 533, 535, 729
 Büchi, R. 273
 Buckle, K. A. 2318
 Buckley, C. A. 1446, 1739
 Budroni, M. 2573
 Budu-Amoako, E. 44, 975, 1068
 Buisman, C. J. N. 3708
 Buisson, Y. 95
 Buitrón, G. 1538
/>
 Buijang, K. B. 1256
 Bukhtiyarova, M. 799
 Bulatović, V. 40
 Bull, A. T. 3432, 3434
 Bullerman, L. B. 896
 Bullock, R. C. 2107
 Bulman, T. L. 3241
 Bumpus, J. A. 1515, 3551
 Buncic, S. 2199
 Bundgaard, E. 2337
 Bundle, D. R. 243
 Bunduki, M. M. C. 2138
 Bünemann, T. 1546
 Bunnag, B. 1404
 Bunning, V. K. 5
 Buoy, K. 1385
 Burbach, B. L. 574, 2719, 3496
 Burckhart, M. F. 948
 Burdsall, H. H., Jr. 817
 Bureau, G. 3514
 Burgess, A. Y. 2970
 Burgess-Cassler, A. 1539
 Burggraf, S. 3864
 Burgoon, P. S. 3336
 Burgstaller, W. 2598
 Burica, O. 1640
 Burina, T. Ya. 234
 Burkhalter, P. 884
 Burlage, R. S. 2532
 Burlot, P. M. 3106
 Burnes, T. A. 624
 Burns, R. G. 621, 801, 1747, 3631
 Burton, C. H. 754
 Bush, B. 2463
 Buss, S. 1608
 Busscher, H. J. 1018, 3009
 Busse, H. J. 3421
 Busta, F. F. 1033, 1048, 1882
 Buswell, J. A. 2266, 2373
 Butler, B. J. 3403
 Butler, D. 3357
 Butler, E. L. 317
 Butler, J. E. 1333
 Butsch, B. M. 481
 Buttner, M. P. 3160
 Buunen-Van Bergen, A. H. M. 3702
 Buyong, N. 2693-2694
 Buzard, K. S. 947
 Buzzetti, I. 173
 Byrd, C. S. 2245
 Byrom, D. 743, 1550
 Cabado, A. G. 943
 Cabaj, A. 3072
 Cabanás Espejo, P. J. M. 1872
 Cabañes, F. J. 2927
 Cabedo, L. 255
 Cabelli, V. J. 2833, 3367
 Cabras, P. 2573
 Cabrera, M. L. 2240
 Cachaza, J. M. 693
 Cahagnier, B. 1975
 Cahill, M. 1062
 Cailliez, C. 2718
 Cain, R. B. 3648
 Caine, M. 2315
 Caire, G. 1185
 Ćakici, A. 1328
 Calcaterra, E. 1140
 Caldwell, D. E. 623, 2110
 Caldwell, W. M. 2617
 Calicchia, M. L. 1941
 Call, J. E. 996, 998, 1104, 2991
 Callanan, M. 3439
 Calvez, L. 1632
 Camacho, R. 3375
 Cambraia, J. 3888-3889
 Camp, C. 3430, 3541
 Campanini, M. 2948
 Campbell, A. M. 1158
 Campbell, A. T. 2825, 3077
 Campbell, C. K. 99
 Campbell, D. J. V. 453-454
 Campbell, J. R. 509
 Campbell, M. L. 1988
 Campbell, P. G. C. 640
 Campbell, P. J. 3586
 Campbell, S. A. 3052
 Camper, A. 1213
 Campos, V. 814
 Canale-Parola, E. 2490
 Cancelon, P. F. 1999
 Cancel, A. M. 3001
 Candau, P. 3867
 Candau, Y. 877
 Candrian, U. 884
 Canela, R. 1973, 2950
 Caneva, G. 2114
 Canevascini, G. 536-537
 Canganella, F. 514
 Cañizares, R. O. 752
 Cañizares-Villanueva, R. O. 1767-1768, 2368
 Canler, J. P. 1259, 1314
 Cannio, R. 542
 Cano, R. J. 39
 Cánovas, M. 609
 Canter, L. W. 2678
 Cantoni, C. 867, 2829, 2913-2914
 Canty, G. A. 2366
 Cao, W. W. 815
 Cao, Y. S. 1215, 3259, 3824
 Cao, Z. Y. 3848
 Capasso, R. 587
 Capdeville, B. 677, 1304, 1538, 1624-1625, 1632, 1650, 1655, 3261, 3698
 Capela, A. B. 93
 Caplice, E. 232
 Capodaglio, A. G. 1201
 Cappelier, J. M. 2986
 Capps, R. W. 2322
 Caprais, M. P. 3153
 Caracappa, S. 2912
 Caravaglio, N. 1318
 Carberry, J. B. 2465, 3238, 3245
 Carbis, C. R. 29
 Cardenas, B. 3172
 Carey, J. B. 2077
 Carle, A. 1831
 Carliell, C. M. 1446, 1739
 Carlin, F. 890, 935, 2010
 Carlo, M. di 3156
 Carlsson, B. 297, 2255
 Carminati, D. 1064
 Carnicero, A. 1467
 Carnimeo, D. 295
 Carozzi, F. 2914
 Carpenter, J. A. 979
 Carramiñana, J. J. 89
 Carreau, P. J. 3614
 Carrière, J. 3802
 Carrington, B. 2422
 Carroll, K. 3122
 Carroquino, M. J. 562
 Carstensen, J. 672
 Carswell, K. S. 1551
 Carter, D. R. 1122
 Carter, J. P. 825
 Carter, S. 1122
 Cartier, A. 2557
 Cartwright, A. L. 991
 Cartwright, R. Y. 2835
 Carucci, A. 1325
 Carvalho, F. 462
 Carvalho, R. P. de 1574
 Casas, C. 489, 2210
 Casas, C. 869
 Casella, M. 1944
 Casey, T. G. 1312, 1323
 Casolari, C. 2035
 Cass, A. E. G. 2106
 Cassidy, M. B. 800
 Castellá, G. 2927
 Castillo, A. 930, 1123, 2937
 Castillo, F. 2723
 Castillo, G. 25
 Castro, A. F. P. 1946
 Castro, C. E. 1452, 1498, 3453
 Castro, G. R. 2783
 Castro, H. F. de 516
 Catalano, C. R. 1001, 1096
 Caton, J. E. 2617
 Cattani, O. 2014
 Cattell, F. C. R. 1364
 Caugant, D. A. 2954
 Cavagnis, E. 3761
 Cavalli, L. 2580
 Cayol, J. L. 660, 3454
 Cazorla, F. 3155
 Ceazan, M. L. 3719
 Cebula, T. A. 2967
 Ceccanti, B. 493, 751
 Ceccato-Antonini, S. R. 715
 Cecchi, F. 2692, 3352
 Çeçen, F. 1634, 1645, 1727
 Čech, J. S. 1652, 1819
 Cembella, A. D. 2959
 Cerniglia, C. E. 1456, 1484, 1495, 3204
 Černilec, M. 634
 Cero, C. dal 3156
 Cerqueira, A. M. F. 1093
 Cerro, R. M. 1304
 Cha, D. K. 1582
 Chabot, B. 2052
 Chachin, K. 933
 Chacon-Reche, N. O. 72
 Chadha, B. S. 2388
 Chaffey, B. J. 2058
 Chaffin, J. 2293
 Chaglia, A. H. 1852
 Chai, T. J. 1130
 Chaîneau, C. H. 2525
 Chakraborty, T. 12
 Chakradhar, B. 2665
 Chakravarty, L. 3858
 Chakraverty, R. 282
 Chalabi, M. 416
 Chalamet, A. 495
 Chamberland, H. 2099
 Chambers, B. 3328
 Chambers, J. M. 1339
 Chambers, P. A. 1604
 Chambers, R. P. 2659
 Champomier-Vrgès, M. C. 1089
 Chamy, R. 549
 Chan, C. W. 1599, 2611
 Chan, O. C. 2552
 Chan, Y. K. 3728
 Chan, Y. Y. 3044
 Chan YiuKwok 3728
 Chanakya, H. N. 484
 Chandra, P. 811, 2589
 Chandrasekaran, M. 1752
 Chaney, R. L. 1164
 Chang, D. 3320
 Chang, D. P. Y. 3304
 Chang, H. L. 2400
 Chang, H. N. 3813
 Chang, H. T. 1175
 Chang, J. 3723
 Chang, J. C. S. 3025
 Chang, J. S. 641
 Chang, P. K. 1962
 Chang, P. P. 3406
 Chang, S. T. 2373
 Chang, S. Y. 2627
 Chang, T. C. 1082, 2012
 Chang, T. M. S. 2743
 Chang, W. K. 2403

- Chang, Y. J. 2551, 3705
 Chao, W. L. 3409
 Chapatwala, K. D. 1601, 2441
 Chapelle, F. H. 563
 Chapman, J. I. 742
 Chapman, J. S. 2725
 Chapman, P. A. 2846
 Chapman, P. J. 3685
 Characklis, W. G. 666, 820
 Charbonneau, R. 218
 Charjan, S. K. U. 82
 Charlier, A. C. 3258
 Charlier, R. H. 3211
 Charlton, J. 1607
 Charoencan, N. 3159
 Charriere, G. 861
 Chartier, M. 2597
 Chatjikonstantinou, G. J. 1651
 Chatsanguthai, S. 1269
 Chattopadhyaya, N. 656
 Chaudhry, G. R. 2813
 Chaudhry, M. Y. 176
 Chaudhuri, B. K. 2524
 Chaudhuri, J. 1577, 2594
 Chaudhuri, M. 236
 Chauret, C. 2405
 Chávez, S. 3867
 Chawla, S. P. 220
 Cheah, C. T. 1885
 Check, G. G. 387
 Chee-Sandfors, J. 3494
 Chen, A. 1763, 2309
 Chen, C. H. 2535
 Chen, C. I. 197, 2164, 3680
 Chen, G. H. 345
 Chen, H. 2271, 2685, 2765, 3108
 Chen, J. 2328, 2348, 3114
 Chen, J. C. 334, 2739, 3112
 Chen, J. H. 645, 3677
 Chen, J. M. 1265
 Chen, J. S. 2621
 Chen, K. C. 1168, 3710
 Chen, L. L. 1097, 2018
 Chen, P. 3650
 Chen, P. C. 674
 Chen, T. 1535, 2102, 2552
 Chen, T. R. 45
 Chen, T. Z. 3040
 Chen, W. 566
 Chen, X. T. 1372
 Chen, Y. F. 2392
 Cheng, I. 3040
 Cheng, T. 1951
 Cheng, T. L. 3406
 Cheng, Y. P. 3594
 Cheng YungPin 3594
 Cheong, Y. M. 2004
 Cheremisinoff, P. N. 2808
 Chetty, C. S. 1601
 Cheung, C. W. S. 3052
 Chica, A. 551, 1668
 Chiellini, E. 3279
 Childers, A. B. 946
 Chin, K. K. 340, 561, 3366, 3909
 China, B. 2184
 Chirkis, A. 2741
 Chitaree, K. 2939
 Chitinityol, S. 880
 Chiu, H. H. 1583
 Chlebecki, A. 2100, 2216
 Cho, H. Y. 459
 Cho, J. G. 2741, 3838
 Cho, J. K. 3813
 Cho, J. S. 1118
 Cho, K. D. 459
 Cho, K. S. 3018
 Choate, D. M. 1584
 Choi, C. Y. 1443
 Choi, E. 3250
 Choi, S. C. 3674
 Choi, S. J. 806
 Choi, S. Y. 1065
 Choi, Y. C. 1197
 Chong, K. H. 1574
 Chong, N. M. 1693, 2535
 Chong, Z. J. 2364
 Choorit, W. 1908, 2359
 Chou, C. C. 984
 Chourasia, H. K. 64
 Chow, M. C. 3397
 Chowdhury, I. 1993
 Chowdhury, N. A. 2476
 Chozick, R. 3219
 Chresand, T. J. 2426
 Christakopoulos, P. 3612
 Christiansen, N. 1501, 2530
 Christiansen, P. 1277
 Christie, G. E. 779
 Christopher, N. S. J. 2855
 Christoulas, D. G. 1862
 Christov, L. P. 1722, 3775
 Chronas, G. 257
 Chua, H. 2392, 2637
 Chuang, T. S. 601
 Chuauqui-Offermanns, N. 3060
 Chubachi, M. 502
 Chudoba, P. 1310, 1821
 Chugunov, V. A. 1022
 Chui, H. K. 1228, 2401, 2559
 Chum, H. L. 1477
 Chung, G. S. 2070
 Chung, H. 3154
 Chung, K. H. 1555, 2648-2649
 Chung, K. T. 1598, 3099
 Churchill, P. F. 1502
 Churchill, S. A. 1502
 Churey, J. J. 104, 1998
 Churn, C. C. 1686
 Chynoweth, D. 3349
 Chynoweth, D. P. 1818, 3396
 Ciavatta, C. 356
 Ciccarelli, E. 1735
 Ciccoli, R. 3569
 Cidaria, D. 1855
 Cillard, J. 274
 Cilleros, B. 2116
 Cingolani, L. 1735
 Cinti, S. 595
 Cioni, F. 3279
 Citterio, B. 2906
 Ciuffolini, S. 2965
 Civera, T. 2019, 2037
 Civilini, M. 1255
 Claeys, M. 61
 Claeysens, M. 545
 Clancy, J. S. 3394
 Claret, C. 1455
 Clark, B. 2436
 Clark, D. C. 320
 Clark, D. L. 1576
 Clark, D. P. 497
 Clark, P. J. 2251
 Clark, R. M. 1748, 2161
 Clark, T. 1720
 Clarke, A. 3443
 Clarke, K. F. 570
 Clarke, R. A. 153, 2989
 Clarke, R. C. 911, 1006
 Claus, H. 822
 Claus, J. R. 2971
 Clausen, E. C. 1400
 Clavero, M. R. S. 87, 2145, 2977
 Clay, S. 427
 Clayton, J. S. 3763-3764
 Cleemput, O. van 2295
 Clément, B. 3403
 Clément, R. L. 2213
 Cleveland, T. E. 1974, 2858, 2929
 Cliver, D. O. 837, 1053, 1070, 2693-2694, 3083, 3091
 Cloete, T. E. 981, 1028, 2021, 2133, 3746, 3748
 Cloirec, P. le 1664
 Clouser, C. S. 2075-2076
 Cluff, C. B. 2897
 Coallier, J. 855
 Coates, K. J. 2050
 Coaiga-Bousquet, M. 2731
 Cockey, R. R. 1130
 Codd, G. A. 612, 649, 2262
 Codina, J. C. 3155
 Codling, E. E. 611
 Cohen, I. 3342
 Cohen, Z. 2507
 Coker, R. D. 2924
 Colavita, G. 1009
 Cole, J. 3494
 Cole, J. R. 2412
 Cole, M. B. 1883, 1932, 2975
 Cole, S. R. 27
 Coleman, H. P. 1880-1881
 Coleman, R. N. 3308
 Coletti-Previero, M. A. 281
 Colin, P. 48, 2820
 Coll, P. M. 1832, 3882
 Collochio, M. T. A. 462
 Collieran, E. 2638
 Colli, I. A. G. 1946
 Collie, S. L. 3450
 Collins, A. R. 1241
 Collins, E. 2789
 Collins, M. D. 139, 270, 1956-1957
 Coloma, V. 25
 Colombi, A. 1140
 Colquhoun, K. O. 1440
 Colwell, R. R. 3360, 3363
 Coma, V. 3514
 Comar, P. G. 951
 Comeau, Y. 322, 3403
 Comi, G. 2829, 2906
 Commandeur, L. C. M. 3442
 Compernelle, F. 3620
 Compton, J. A. F. 2932
 Concha, M. 814
 Conde, J. L. 483
 Confer, D. R. 2252
 Congregado, F. 3671
 Čonková, E. 1970
 Connell, M. 1015
 Conner, D. E. 982, 997
 Connolly, P. 1020
 Connor, M. A. 1622
 Conrad, J. 2303
 Constant, W. D. 2265
 Constanti, M. 3407, 3420
 Contini, E. 295
 Contreras, M. 2233
 Converse, A. O. 2483
 Converti, A. 3742
 Conway, A. 1151
 Conway, W. S. 928
 Conway De Macario, E. C. 3861
 Cook, A. M. 520, 1740, 3641, 3644-3645
 Cook, C. M. 888
 Cook, P. E. 112, 1117, 2136, 2985
 Cook, T. E. 3278
 Cook, W. S. 1429
 Cooke, J. G. 1353
 Cooke, P. H. 2849
 Cooke, V. M. 2132
 Cookson, J. T., Jr. 2806
 Coon, C. L. 3773
 Cooney, J. J. 2110, 3563, 3856
 Cooper, A. B. 1345
 Cooper, P. 1621
 Cooper, W. J. 733
 Coopman, R. 1911
 Coote, P. J. 2975
 Coote, T. 2543
 Copa-Patiño, J. L. 3874
 Copp, J. B. 2710
 Coppen, P. 2986
 Coppola, R. 2195
 Coppola, S. 988, 3084
 Coratza, G. 3128
 Cord-Ruwisch, R. 737-738, 3178
 Cordes-Tolle, M. 1729
 Cordier, J. L. 2851
 Cordoba, J. J. 1956
 Córdoba, L. T. 722
 Cordoba, M. G. 2088
 Cormier, M. 3153
 Cornier, J. C. 1650, 2625, 3698
 Cornish, A. 3611
 Coroler, L. 1912
 Corona, A. I. 1768
 Correa, B. 72, 2934
 Correa, I. E. 1564
 Cortesi, M. L. 2976
 Corti, A. 3579
 Corwin, A. L. 2013
 Coschigano, P. W. 3438
 Cosgrove, J. M. 3773
 Cossignani, M. 1735
 Costa, M. S. da 858
 Costanza, O. R. 2267
 Costerton, J. W. 1488, 3597
 Côte, M. 1327
 Cothern, J. T. 3370
 Coti, A. 3279
 Cottell, P. L. 187
 Cotingham, P. D. 1355
 Couderc, J. P. 1177
 Coughlan, M. P. 543, 1837
 Couillard, D. 2597
 Coulom, T. 1183
 Coulter, C. 2751
 Cousse, H. 2369-2370
 Coutinho, C. M. L. M. 199-200
 Couturier, Y. 3514
 Covarrubias, G. Iñiguez- 2375
 Coveney, H. 232
 Coveney, H. M. 2093
 Covert, S. 3872
 Covert, T. C. 2720
 Cowburn, J. K. 857
 Cox, H. H. J. 3605
 Cox, J. M. 1879, 3797
 Cox, N. A. 990, 2992
 Cox, P. 3138
 Cox, P. T. 2188
 Cox, R. P. 1181
 Crabbe, J. R. 509
 Craig, J. A. 1982
 Craig, M. 3095
 Crance, J. M. 948
 Crandall, A. D. 1060
 Craun, G. F. 827
 Crawford, C. 878
 Crawford, D. L. 1449, 2269
 Crawford, R. L. 616, 1449, 1590, 2269, 2450, 2519, 3480
 Cresswell, M. 2220
 Cresti, S. 3128
 Creuly, C. 2423
 Cridde, C. S. 2403
 Crine, M. 1273
 Crispim dos Anjos, A. 2978
 Crites, R. W. 1330, 2794
 Croll, B. T. 2895
 Cronenberg, C. 2742
 Cronenberg, C. C. 1196
 Croteau, G. 3290
 Crow, S. A. 1542
 Cruz, M. S. 2368
 Csikor, Z. 1180
 Cubol, F. S. 2383
 Culbertson, C. W. 3448
 Cullen, D. 3872
 Cullen, W. R. 1492
 Cummings, R. J. 486, 3574
 Cummings, S. P. 455, 2391
 Cummings, T. L. 949
 Cunningham, A. B. 1200
 Cunningham, D. P. 3673
 Cunningham, J. 318
 Cunningham, M. A. 2823
 Cuperus, F. P. 541
 Cuperus, G. W. 3911
 Cuq, J. L. 3514
 Curiale, M. S. 2208
 Curotto, E. 814
 Curragh, H. 518
 Curran, I. 1826
 Curtis, L. M. 883
 Curtis, T. P. 414
 Curchet, G. 747, 1753
 Cusack, T. M. 2160
 Cutright, T. J. 1165, 2259, 2264
 Cutter, C. G. N. 2149
 Cutter, C. N. 1040
 Cuyck-Gandre, H. van 948
 Cygler, M. 243
 Cygnarowicz-Provost, M. 2092
 Cypionka, H. 3852
 Czajka, D. R. 3677
 Czajka, J. 30, 2881
 Czakai, J. 1827
 Czakó, L. 1180
 Czuprynski, C. J. 4
 Da Costa, M. S. 858
 Da Silva, M. C. 2040
 Da Silva, M. C. D. 2039
 Da Silva, R. 805
 Da Silva, S. S. 2474

- Daaka, Y. 260
 Dabrowski, W. 3175
 Dacic, Ž. 1072
 Dacle, M. van 407, 3323-3324
 Daengprom, K. 152
 Daeschel, M. 3107
 Daeschel, M. A. 2207
 Dagnall, S. 3348
 Dagot, C. 2677
 Dague, R. R. 1680, 2288
 Dahab, M. F. 3789
 Dahlberg, A. G. 340, 3909
 Dahlberg, L. 3873
 Dai, J. H. 2012
 Dai, L. M. 3332
 Dai, Y. C. 2217
 Dai LiMei 3332
 Daigger, G. T. 1266, 1658, 2331
 Dainty, R. H. 128, 139, 240
 Dal Cero, C. 3156
 Dalev, P. G. 1417
 Daley, E. 2073
 Daley, E. F. 2137
 Dalhammar, G. 1816
 Dalis, D. 423
 Dall'Aglio, G. 1983
 Daly, C. 232, 2093
 Daly, D. 2706
 Dalzell, J. M. 2800
 Danecka-Biatek, M. 2622
 Dangcong, P. 1730
 Daniel, G. 3525
 Danielides, B. D. 2065
 D'Annibale, A. 464, 2536
 D'Antone, S. 3579
 Daoming, S. 2345, 2641
 Daoudi, A. 2057
 Darrah, B. 3257
 Darwish, A. 2013
 Das, A. 2376, 3547
 Das, P. 3528
 Das, R. P. 2586
 Dashti, B. H. 2074
 Dass, P. 1368
 Dass, S. B. 2763
 Datta, A. R. 2880, 3096
 Daube, G. 2184
 D'Aubert, S. 867
 Dave, S. R. 2591, 2610
 Davey, M. 658
 Davidova, M. N. 1594
 Davidson, C. 1849
 Davies, C. M. 3125, 3194
 Davies, L. J. 3186
 Davies, R. 2189
 Davies, T. H. 1355
 Davies-Colley, R. J. 3167-3168
 Davis, A. S. 1125
 Davis, B. 3792
 Davis, C. 3286
 Davis, G. B. 3222
 Davis, M. W. 2534
 Davis-Hoover, W. 2269
 Davison, A. D. 3424
 Davoust, B. 2080
 Dawes, E. A. 743
 Dawsey, J. 562
 Dawson, C. N. 2700
 Dawson, D. S. 1171
 Dawson, J. B. 342
 Day, G. 3297
 Day, S. P. 3091
 Day, T. 2190
 Day, T. L. 57
 De Angelis, F. 1131
 De Barros Ostiz, S. 2570
 De Beer, D. 741, 2742
 De Bernardi, P. 867
 De Bertoldi, M. 1255, 2790
 De Beyer, A. 560
 De Blois, S. 2736
 De Boer, A. P. N. 1796
 De Boer, A. S. 919
 De Boer, C. E. 3009
 De Boer, E. 156
 De Boer, J. 3708
 De Bont, J. A. M. 2522, 3251, 3561
 De Bruyne, T. 61
 De Carvalho, R. P. 1574
 De Castro, H. F. 516
 De Donato, P. 3793
 De Felice, B. 705
 De Felice, M. 3085
 De Gooijer, K. D. 3251
 De Grey, B. 3693
 De Groot, A. 2522
 De Heyer, B. 2516
 De Hoog, G. S. 2120
 De Jong, E. 1471, 3182, 3561, 3881
 De Jong, P. 3701
 De Koning, W. 2462
 De La Farge, B. 2801
 De la Fuente, G. 1467
 De la Noüe, J. 2274, 2686
 De la Rosa, M. del C. 862
 De la Torre, M. 699, 1768, 2481
 De Leon, R. 2862, 3135
 De Leon, S. P. 115
 De Longeaux, N. 1183
 De Lorenzo, V. 773, 3439
 De los Angeles Mosso, M. 862
 De Louvois, J. 2839
 De Macario, E. C. 3859, 3861
 De Mancilha, I. M. 2474
 De Meyer, C. P. 3211
 De Mot, R. 3620
 De Poorter, M. P. 1196, 1558
 De Putter, H. 106
 De Revel, G. 93
 De Ruitter, G. A. 1929
 De Sève, M. A. 2229
 De Troya, T. 2148
 De Vasconcellos, F. J. M. 1895
 De Vicente, A. 3155
 De Vos, D. 655
 De Vos, P. 1558, 2848
 De Vries, M. 927
 De Wever, H. 655
 De Wit, D. 300
 De Wolf, J. 3442
 De Wys, S. L. 3463
 Deak, T. 1994, 2945
 Deakin, J. 159
 DeAlteris, J. T. 2107
 Dean, J. F. D. 3871
 Debaere, G. 3649
 Deberghes, P. 2851
 Debevere, J. 1034, 2186
 Debevere, J. M. 149
 Debray, E. 877
 Debruy, W. 1649
 Debus, O. 1493-1494, 2445
 DeBusk, T. A. 3336
 Dec. J. 593
 Deckard, L. A. 2420
 Deckwer, W. D. 1521, 3475, 3616
 Dee, A. 1621
 Dees, C. 2484, 2740
 DeGrey, B. 394
 Deguin, A. 1650, 2625, 3037, 3698
 Dehmel, U. 2447
 Dehning, I. 2397
 Deidda, F. 1855
 Deininger, A. 398
 Deivanai, K. 3391
 Del Borghi, M. 3742
 Del Moral, A. 2233
 Del Panno, M. T. 2267
 Del Rosario, B. A. 2007
 Del Rosario, E. J. 2756
 Delaloglu, C. G. 2612
 Delanghe, B. 1664
 Delaquis, P. J. 35
 Delattre, G. 1995
 DeLaune, R. D. 2265
 DeLeo, P. C. 1572
 Delezene-Briggs, K. M. 2675
 Delia-Dupuy, M. L. 1963
 Delle Monache, G. 2536
 Delmas, C. 908
 DeLong, E. 3659
 Delves-Broughton, J. 2155, 2166
 Demir, I. 1717
 Demnerova, K. 3833
 Demoss, J. A. 1100
 DeMuro, P. E. 3292
 Demuynck, C. 683, 2333
 Den Engelse, R. 3700
 Deneer, H. G. 3113
 Deng, J. Q. 1372
 Deng, M. Y. 3083, 3091
 Dengremont, E. 252
 Denis, J. C. 2986
 Denis, P. 3268
 Dennis, P. J. 1110, 3034
 Denome, S. A. 3570, 3829
 Denyer, S. P. 1020
 Deopurkar, R. L. 1150
 Derco, J. 1580, 1635, 2623
 Dercová, K. 2414, 2466-2467
 Derikx, P. J. L. 1764
 Deroeever, C. M. 847
 Deront, M. 512
 Derrien, A. 1134, 1139, 3153
 Déry, C. V. 803
 Desai, J. D. 1687
 Desai, M. 439
 Descheemaeker, P. 2117
 Deschenes, L. 661
 Deshpande, C. V. 2286
 Desiderio, B. 542
 Desmarchelier, P. M. 1853, 2922
 Desmazeaud, M. 2167
 Desmazeaud, M. J. 3855
 Devare, M. 1157
 Devasia, P. 3795
 Deveci, N. 2612
 Devi, G. S. 1462
 Devi Prasad, P. V. 3887
 Devlin, J. S. 2499, 3247
 Dewailly, E. 3227
 DeWalle, F. B. 3144
 Dewedar, A. 3335, 3338
 Dewjanin, W. 1195
 Dey, B. K. 656
 DeYoe, H. R. 3152
 DeZenclos, T. 3492
 Dezfulian, M. 1900
 Dhaka, V. K. 713
 Dhamodharan Srinivasan 1695
 Dhawan, S. 195
 Dhillon, G. S. 1474, 1833
 Dhir, V. K. 2854
 Di Carlo, M. 3156
 Di Dio Balsamo, D. 1318
 Di Falco, G. 3000
 Di Gennaro, P. 568
 Di Gioia, D. 592
 Di Giorgio, G. 3569
 Di Maggio, T. 3128
 Di Marino, R. 295
 Di Noto, L. 2964-2965
 Di Padova, F. 892
 Di Pinto, A. C. 1389
 Diakumaku, E. 2112
 Diaper, J. P. 1848
 Diaz, L. A. 1567, 3543, 3643
 Diaz, M. 1665
 DiChristina, T. J. 3659
 Dichtl, N. 1275
 Dick, R. E. 3629
 Dick, W. A. 2298, 3628
 Dickinson, J. H. 1935
 Dickson, J. S. 256, 1849, 2149
 Diehl, M. A. 2725
 Diekert, G. 1799, 2454, 2745
 Diekmann, H. 1222, 1224
 Diels, L. 3502, 3827
 Diener, R. G. 1241
 Dietrich, D. M. 2534
 Dietrich, R. 123
 Diez, J. M. 2826, 3065
 Diez, R. 2148
 Diez Blanco, V. 3822
 Diez-Gonzalez, F. 3426
 Dijken, J. P. van 2732
 Diks, R. M. M. 3307
 Dilek, F. B. 1723
 Dillon, V. M. 2799
 Dils, B. D. 959, 978, 2979
 Diman, T. M. 2083
 Dimkov, R. 2408-2409
 Dimmig, L. K. 1099
 Dimcho, D. 2174
 Dion, P. 218, 791
 DiStefano, T. D. 2511
 Ditty, J. L. 3413
 Divizia, M. 2836, 3187
 Diwani, G. El 765
 Dixit, A. P. 713
 Dixo, N. G. H. 414
 Dixon, T. C. 3594
 Diyaolu, S. A. 955
 Dizer, H. 2843, 3165
 Dobbins, D. C. 2253, 2426
 Dobbs, R. A. 2140
 Dobolyi, E. 1782
 Dochain, D. 3323-3324
 Dodd, C. E. R. 901, 1981, 2058, 2171, 2854
 Doddema, H. J. 3605
 Dodds, K. 1922
 Dodds, K. L. 90
 Dodge, C. J. 3675
 Doekes, G. 3157
 Doellgast, G. J. 1951
 Doelman, P. 3215
 Dohányos, M. 1679, 1684
 Doherty, A. 2981-2982
 Dohmann, M. 406, 1154, 1274
 Doi, S. 2103-2104
 Doke, S. N. 1887
 Dókmeci, S. 3782
 Doko, M. B. 904
 Dolan, M. E. 3457
 Dold, P. L. 403, 1218, 1286, 2710
 Doma, H. S. 1719
 Domann, E. 12
 Doménech, A. 1947
 Domeniconi, F. 21
 Domenis, C. 293
 Domínguez, A. R. 752, 2368
 Domínguez, J. 3296
 Domka, F. 2622
 Donachie, W. 1972
 Donadio, F. 295
 Donaghy, J. A. 710, 1414
 Donald, A. S. 2931
 Donald, K. A. G. 1831
 Donald, S. 3810
 Donaldson, T. L. 3565
 Donati, C. 1741
 Donati, E. 747, 1753
 Donato, P. de 3793
 Donberg, P. A. 501
 Dondero, M. 116
 Dong, Q. H. 3827
 Donnelly, C. W. 125, 1109, 2138, 2206
 Donnelly, J. 2852, 3246
 Donnelly, K. C. 3450
 Donnelly, T. 701
 Donnison, A. M. 1145, 3168
 Doolittle, M. M. 2110, 3563
 Doong, R. A. 2460
 Doores, S. 2075-2076, 3080
 Dor, I. 3340, 3373
 Dorias, B. 3741
 Dormaar, J. F. 1480
 Dorn, P. B. 2579
 Dornseiffer, P. 3538
 Dorsch, M. 2188
 Dorworth, E. B. 817
 Dos Anjos, A. C. 2978
 Dosoretz, C. 3519
 Dosoretz, C. G. 2763, 3368
 Dostal, L. 3500
 Dotan, A. 3367
 Dott, W. 813, 1688, 3209, 3242, 3316, 3589
 Doucet, M. 95
 Doucette, G. J. 2222
 Doukyu, N. 3601
 Dousse, C. 3193
 Dousset, X. 2167
 Douwes, J. 3157
 Dowling, D. N. 2735, 3439
 Dowling, J. N. 3035
 Dowsett, A. B. 3034
 Doyle, J. D. 3892
 Doyle, L. M. 3121
 Doyle, M. P. 183, 843, 961, 1031, 1943, 2069, 2145, 2156, 2202, 2977
 Doyon, G. 909

- Draaijer, H. 3702
 Dracos, T. 279
 Drake, E. P. 1706
 Drake, G. R. 3183
 Draughn, R. A. 3011
 Draughton, F. A. 67
 Dreesen, D. W. 871
 Dreesen, R. 2125
 Dressel, L. 1385
 Driessen, W. J. B. M. 1716
 Drikas, M. 1741
 Drimont, P. A. D. 1107
 Drobner, E. 3864
 Droffner, M. L. 3171
 Droffner, M. W. 2297
 Drosinos, E. H. 127, 2053, 2153, 2980
 Drost, Y. C. 2902, 3019
 Drtil, M. 1580, 1678, 3718
 Drysdale, J. A. 184
 Du, L. 642
 Du, Y. G. 2600
 Du Preez, M. 3191
 Du Toit, J. 165
 Dua, S. K. 2992
 Duarte, R. 25
 Duba, A. G. 3223
 Dubey, N. K. 1978
 Dubey, S. K. 3678
 Dubord, P. 3095
 Dubourgier, H. C. 1993
 Dubrou, S. 2879, 3903
 Duchamp, I. 2256
 Duchene, P. 419, 1316
 Dudley, J. 3334
 Dueñas, M. 1990
 Dueñas, R. 3510
 Duff, S. J. B. 600
 Duffy, G. 957-958
 Dufrenne, J. 1091, 2190
 Dugan, F. M. 107
 Dular, M. 1682
 Dumont, L. E. 885
 Duncan, J. R. 644, 646, 807, 1586, 3667
 Dunlop, K. J. 2056, 2949
 Dunn, I. J. 3687
 Dunnigan, M. E. 3899
 Dupont, R. 1284
 Dupray, E. 1134-1135, 1139, 3153
 Dupuy, J. 2930
 Duque, E. 3556
 Duran, M. C. 929
 Durán, M. M. 703, 707
 Duran, N. 814
 Durán Quintana, M. C. 108
 Durant, N. 3201
 Duratti, G. 2829
 Durham, L. 3208
 Durham, W. B. 3223
 Durrup, J. 2843
 Durrer, M. 2851
 Durzi, S. 878
 Dushenkov, S. 3668
 Dushenkov, V. 3220, 3228
 Dusterhoft, E.-M. 2495
 Dutka, B. J. 25, 1126, 1136
 Dutton, J. 591
 Duvnjak, Z. 1401
 Dvorak, D. H. 745
 Dvorsky, E. A. 2861
 Dwinal, C. A. 2306
 Dwivedi, P. p. 2713
 Dwyer, D. F. 1162, 2250, 2447, 2735
 D'yachkov, P. N. 2464
 Dykes, G. A. 46, 143-144, 267, 981, 1003, 2021, 2063, 2970
 Dyreborg, S. 3145
 Dyumaev, K. M. 224
 Dziadkowiec, D. 2096
 Eades, A. 3785
 Early, J. P. 3219
 Earnshaw, R. C. 94
 East, A. K. 1956
 Easter, J. P. 3577
 Eaton, R. W. 507
 Eaton, S. 20
 Eb, P. 2017
 Ebel, J. G., Jr. 620
 Eberspächer, J. 1516, 2452
 Echab, K. 3162
 Eckenfelder, W. 329
 Eckenfelder, W. W., Jr. 1662
 Eckner, K. F. 873
 Eddafry, R. 1882
 Edelstein, P. H. 2853
 Edelstein, W. A. 3599
 Eden, G. E. 835
 Edenborn, H. M. 745
 Edgar, T. G. 1387
 Edgehill, R. U. 596
 Edgington, R. 427
 Edwards, C. 251, 1848, 3176
 Edwards, C. A. 3300
 Edwards, F. G. 2235
 Efrogmson, R. A. 1163, 1519
 Egan, J. 1969
 Eger, P. 1358
 Egestorff, J. 1162
 Eggert, C. 1731
 Eggink, G. 541
 Egli, T. 3421, 3707, 3836
 Egmond, H. P. van 899
 Egozy, Y. 2131
 Ehlinger, F. 1177
 Ehrenreich, L. 1166
 Ehrlich, H. L. 529, 1572
 Ehrman, C. I. 2386
 Eichinger, J. 1639
 Eidens, S. 1616
 Eikelboom, D. H. 1283, 1319
 Eilersen, A. M. 3314
 Einfeldt, J. 1608
 Eisgruber, H. 2772
 Eisgruber, H. G. 2057
 Eitan, G. 3373
 Ejecchi, B. O. 185
 Ek, M. 1702
 Ekama, G. A. 1312, 1323, 2258
 Ekanemesang, U. M. 3224
 Ekateriniadou, L. V. 2378
 Ekberg, S. A. 1576
 Eklund, M. 1042
 Eklund, M. W. 1041, 2956, 2960
 El-Aalam, S. 577
 El-Banna, T. 3421, 3836
 El-Bosserly, A. M. 3820
 El-Deeb, A. A. 193
 El Diwani, G. 765
 El-Dohlob, S. M. 897
 El-Falaki, K. 2636
 El-Gazzar, F. 3046
 El-Gohary, F. 2338
 El-Hamouri, B. 416
 El-Hawary, S. 2338
 El Ibiari, N. 765
 El-Khateib, T. 133
 El-Krati, M. 714
 El-Maghraby, O. M. O. 912
 El-Marrakchi, A. 2786, 2957
 El-Mniai, H. 97
 El-Mougith, A. A. 1026
 El-Nagdy, M. A. 113
 El-Nasser, N. H. A. 3512
 El-Rahim, S. A. 2013
 El-Rahman, H. A. 133
 El-Sayed, M. M. 1475
 El-Sayed, S. T. 3759
 El-Sayed, T. I. 897
 El-Shafei, H. A. 3512
 El-Shanshoury, A. R. 3820
 El-Sharkawy, S. 2013
 El-Sukhon, S. N. 1884
 El-Taweel, A. A. 473, 3382
 Elborne, S. A. 1120
 Elefsiniotis, P. 425
 Elegir, G. 3524
 Eley, M. H. 3535
 Elferink, S. J. W. H. O. 3853
 Eliapenda, S. 2471
 Eliosov, B. 3311
 Elkana, Y. 2884
 Elkin, V. V. 3516-3517
 Ellender, R. D. 951
 Ellis, J. B. 3174
 Ellis, K. V. 3337, 3787
 Ellis, S. 742
 Ellis, W. O. 909
 Ellis-Evans, J. C. 3443
 Elmarrakchi, A. 759
 Elmore, B. B. 2768
 Elmore, M. J. 1957
 Elomari, M. 1912
 Elster, J. 2683
 Eltis, L. D. 2250
 Elton, R. 1057
 Elvidge, A. F. 3328
 Elvira, C. 3296
 Ely, R. L. 2456
 Emanuele, M. C. 2912
 Embarek, P. K. B. 1066, 2016
 Emejuaiwe, S. O. 79
 Emori, H. 1630, 3730
 Encarnacion Rodriguez, M. 2310
 Endo, K. 3843
 Endo, N. 3886
 Endress, H. U. 1458
 Enfield, C. G. 1118
 Eng, F. 2647
 Engelhardt, N. 1275
 Engelse, R. den 3700
 Engesser, K. H. 2447
 England, L. S. 800
 Englund, G. 3832
 Enriquez, C. E. 2869, 3093-3094
 Enzien, M. V. 3436
 Epling, L. K. 979
 Epstein, E. 2308
 Eramo, B. 1633
 Erb, R. W. 3199
 Erdem, B. 14
 Erden, S. 1559
 Ergas, S. J. 386, 3304
 Erickson, N. L. 3370
 Eriksson, K. E. 557
 Eriksson, K. E. L. 3871
 Ermel, G. 48
 Ernst, C. 2416, 2432
 Eroglu, V. 1717
 Esaki, N. 503, 3840
 Escartin, E. F. 930, 2937
 Eschner, C. 775
 Escoffier, Y. 1177
 Esen, I. I. 460
 Eskiizmirli, S. 74
 Espeche, M. E. 565
 Espejo, J. 2087
 Espino, T. M. 2756
 Eposito, E. 814
 Esteban, M. A. 2087
 Esterbauer, H. 2765
 Estes, G. O. 3278
 Estes, M. K. 2958
 Esteve, I. 1807
 Éthier, J. F. 803
 Eto, K. 1919
 Etoh, H. 2134
 Ettala, M. 768
 Eugster, J. 1615
 Eulalie, B. 1995
 Evans, C. S. 582
 Evans, E. 3171
 Evans, F. E. 1495
 Evans, J. C. 2832
 Evans, S. H. 2579
 Evidente, A. 587
 Evison, L. M. 1672, 1751
 Ewald, S. 17
 Exner, J. H. 2811
 Eyiisleyen, S. 2316
 Eyles, M. J. 1853
 Ezeogu, L. I. 478, 916
 Ezzat, S. M. 706
 Fabelo Falcón, J. A. 711
 Fabio, A. 2035
 Fabrikant, R. 1247
 Facey, R. M. 1757
 Fach, P. 38, 48
 Fadda, G. 3133
 Fahmy, M. 1733-1734
 Faia, A. M. 92
 Faid, M. 759, 2940
 Fairbairn, D. A. 2877, 2907
 Fairchild, T. M. 162
 Fairhead, H. 3049
 Fajardo, T. A. 2987
 Falbo-Nelson, M. T. 42, 879, 1934
 Falco, G. di 3000
 Falcón, M. A. 1467
 Falconer, I. R. 3117
 Falihi, A. M. K. 3721
 Falla, J. A. 3657
 Fan, C. Y. 3218, 3540
 Fang, H. H. P. 349, 1221, 1228, 2401, 2552, 2559, 3603
 Fang, T. J. 138, 973
 Fapohunda, A. O. 963, 971
 Fara, G. M. 235
 Farber, J. M. 1078, 2073, 2137
 Farchill, D. 3709
 Fardeau, M. L. 660, 3454
 Farkas, J. 1871
 Farooq, S. 1270, 2539
 Farquhar, G. F. 1510
 Farr, L. 1927
 Farrell, M. 3298
 Farrimond, M. 3703
 Farris, G. A. 2573
 Fathepure, B. Z. 2412, 2453
 Fattal, B. 2833, 2904, 3146, 3340, 3367, 3373
 Fava, F. 592, 595, 2425, 2433
 Favela, E. 2415
 Favire, M. 3268
 Fawwal, A. 150
 Fayad, N. B. 3548
 Fayoux, C. 1301
 Fdez-Polanco, F. 1184
 Fdz-Polanco, F. 3822
 Feakin, S. J. 621, 1747, 3631
 Federici, F. 2277
 Federighi, M. 2986
 Federle, T. 3649
 Federle, T. W. 1568
 Fedio, W. M. 182
 Fedorak, P. M. 323, 1488, 1496, 2455, 2702, 3459
 Feicht, E. A. 1454
 Feidieker, D. 3242
 Feijoo, G. 2347
 Feijoo Costa, G. 3561
 Feinberg, M. 3037
 Feldhaus, M. J. 778
 Feldman, K. 3158
 Feldsine, P. T. 42, 879, 1934
 Felice, B. de 705
 Felice, M. de 3085
 Felipe, M. G. A. 2474
 Felix, J. V. 58
 Feng, P. 1930, 1958
 Fenlon, D. R. 854, 1927, 2931, 3810
 Fenselau, C. 2810
 Fenwick, S. G. 2062
 Feodorov, A. Y. 2440
 Ferchichi, M. 1207
 Ferguson, J. F. 604, 1527, 1536, 1699, 2555, 3414
 Ferguson, S. J. 3635
 Fergusson, A. 675
 Ferienc, P. 285
 Fernandes, L. 1254, 1766
 Fernández, A. 1381
 Fernandez, J. L. 1991
 Fernández, J. M. 3275
 Fernandez, K. 1990
 Fernandez, M. G. M. 3793
 Fernandez, N. 694
 Fernández, P. 2218
 Fernandez, P. S. 925, 3047
 Fernández, S. 773
 Fernández-Astorga, A. 2005
 Fernandez-Galiano, D. 1148
 Fernández-Gonzalez, M. J. 108
 Ferrari, A. 1140
 Ferrari, M. D. 1410
 Ferrazza, D. 3192
 Ferrer, J. 637
 Ferrero, G. L. 2790
 Ferrey, M. L. 624
 Ferroni, G. D. 2734
 Ferry, J. G. 485, 496
 Felt, J. P. 3888-3889
 Fetzner, S. 560, 2582
 Feuerhake, E. 3861
 Feuersenger, D. 1899
 Fewson, C. A. 570, 2515
 Fichi, C. 3579

- Fick, M. 2677
 Fiechter, A. 3132, 3262-3263
 Fiehn, N. E. 207
 Field, J. A. 348, 1229, 1471, 1566, 1714, 1719, 2268, 3182, 3561, 3636, 3881
 Field, T. M. 3636
 Fielding, L. M. 1117, 2136, 2985
 Fieldwick, P. A. 1485
 Figueira, M. M. 2631
 Figueras, M. J. 2845
 Filho, P. M. 3536
 Filippelli, M. 3664
 Filonov, A. E. 3564
 Finch, G. R. 838, 2824, 3786
 Finkelshtein, Z. I. 1561, 3769
 Finnegan, S. 2638
 Finnerty, W. R. 3546
 Finster, K. 2399, 3692
 Firk, W. 1275
 Firtenberg-Eden, R. 881
 Fischer, B. 3068
 Fischer, D. E. 562
 Fischer, E. 227
 Fischer, G. 13
 Fischman, O. 72
 Fish, J. T. 1905
 Fiskin, K. 3758
 Fissler, J. 581
 Fitzgerald, G. F. 232, 2093
 FitzGerald, S. W. 2652
 Flanders, F. J. 2206
 Flanders, K. J. 125, 1109, 2138
 Flathman, P. E. 2811
 Flehmig, B. 3068
 Fleit, E. 2710, 3724
 Fleming, H. P. 2952
 Fleming, J. T. 3235
 Fleming, M. G. 170
 Flemming, H. C. 3869
 Flengsrud, R. 2707
 Fletcher, D. L. 990
 Fletcher, G. C. 2968
 Fletcher, M. 3039
 Fletcher, R. D. 3234
 Flick, G. J. 758
 Fliermans, C. B. 3436
 Flint, S. H. 2911
 Fliss, I. 3897
 Flora, J. R. V. 302, 676, 1745, 2771, 3273-3274
 Florencio, F. J. 3867
 Florencio, L. 1229, 1566
 Flores, M. 268, 2116
 Flors, A. 2704, 2728
 Flowers, R. S. 873
 Fluitt, A. C. 2090, 2774
 Flynn, K. 2218
 Flynn, K. J. 2218
 Flynn, O. M. J. 995
 Flyvberg, J. 2521
 Foarde, K. K. 3025
 Focht, D. D. 3481, 3489, 3498
 Foegeding, P. M. 162
 Fok, A. K. 2875
 Folchi, A. 109
 Fomchenkov, V. M. 1022
 Fonarev, N. 3805
 Fondevila, N. A. 2042
 Fong, W. F. 2360
 Fongsatitkul, P. 2343
 Fontenot, J. P. 758
 Fontvielle, D. 1217
 Foot, R. J. 1114, 1313
 Forbes, R. H. 377
 Ford, M. G. 1333
 Ford, R. J. 1399
 Ford, T. 2919
 Forestière, K. 2146, 3098
 Forney, L. J. 3621, 3630
 Forsberg, C. W. 3534
 Forster, C. 429
 Forster, C. F. 396, 694, 1114, 1313, 1571, 2290, 2345, 2641, 3270, 3276
 Forsythe, S. J. 2096
 Fortin, D. 3656, 3792
 Fortnagel, P. 2413, 3425, 3455
 Foster, R. 878
 Fougias, E. 396
 Fournier, G. 3865
 Fournier, J. C. 3865
 Fournier, R. 665
 Foutz, K. R. 2858
 Fox, A. 3111
 Fox, C. 878
 Fox, J. B., Jr. 1875, 3059
 Fox, J. L. 3203
 Foy, R. H. 1129
 Fradette, S. 1557
 Fraefel, C. 3132
 Fraile, E. R. 565
 Frampton, E. W. 1054, 1090
 Francis, A. J. 2714, 3675
 Francis, D. J. 2669
 Franck, M. 2833
 Francke, W. 2413
 Franco, E. 2891
 Franco, J. M. 2218
 Franco-Gómez, M. de J. 2372, 2375
 Frändberg, E. 823
 Frank, J. 2732
 Frank, J. F. 1021, 1095, 2111
 Frank, J. R. 3395
 Frank, S. 3433
 Frank, Z. R. 86
 Frankenberger, W. T., Jr. 648, 3550
 Franklin, W. 1456
 Franssen, M. C. R. 2522
 Franta, J. 1728, 1736
 Frantisek Zadrazil 1463, 2486
 Franz, A. 1320
 Franzetti, L. 1084
 Frassinetti, S. 3579
 Fraticchio, P. M. 34, 2170
 Frazer, A. C. 3573
 Frechen, F. B. 766
 Fredenburgh, D. 1913
 Frederick, D. J. 1356
 Frederick, T. L. 977
 Fredrickson, H. L. 3638
 Fredrickson, J. K. 3183
 Freeborne, J. 1234
 Freeman, C. 1152
 Freeman, J. P. 1484
 Freer, J. H. 1901
 Freijer, J. I. 3225
 Freitas dos Santos, L. M. 1435, 3355, 3411, 3416, 3428
 Fremy, J. M. 97, 1878
 Friant, P. 2557
 Frias, J. 28
 Fricker, C. R. 856-857, 1857
 Fricker, E. J. 856-857, 1857
 Fricourt, B. V. 1063
 Friedland, E. 298, 3163
 Friedler, E. 335
 Friedman, H. 260
 Friedman, R. J. 3011
 Friedrich, C. G. 1812, 3845
 Friell, L. A. 2885
 Fries, M. 3494
 Frifflis, C. L. 155
 Frigon, J. C. 2644, 3257
 Frijters, C. T. M. J. 3488
 Frimmel, F. H. 1847, 2905
 Frind, E. O. 3403
 Frisvad, J. C. 2214
 Fritzsche, C. 1511
 Fröhlich, A. A. 894
 Frolián-Gonzalez, J. 1560
 Frölund, B. 1614, 1856
 Frost, J. P. 290
 Frost, S. 1208
 Frostell, B. 1702
 Fruend, C. 3341
 Fruhen, M. 1274, 1616
 Fründ, R. 1465
 Fry, I. J. 3858
 Fry, V. A. 315
 Frye, C. L. 3318
 Fu, A. H. 976
 Fu, C. 1329
 Fu, M. H. 576, 3462
 Fu, Y. C. 1176, 1189, 1280, 2284
 Fuchs, G. 1448, 2528, 3578
 Fuchs, R. S. 118
 Fuente, G. de la 1467
 Fuerst, J. A. 1062, 2823
 Fuhrer, Y. 2851
 Fujie, K. 1281, 1666
 Fujii, T. 1098, 1786
 Fujikawa, H. 1116
 Fujikura, Y. 2398
 Fujimura, H. 2779
 Fujimura, Y. 628
 Fujio, Y. 219
 Fujioka, R. S. 3159
 Fujita, A. 2134
 Fujita, M. 397, 402, 2406-2407, 3269, 3640
 Fujiwara, Y. 3640
 Fukagawa, A. 2030
 Fuks, D. 3090
 Fukuda, H. 1786
 Fukuda, Y. 3886
 Fukui, M. 613
 Fukumori, F. 622
 Fukunaga, I. 3716
 Fukuoka, J. 1828
 Fukushima, K. 3320
 Fukushima, E. 1174
 Fukushima, H. 1889, 1910
 Fukuzaki, S. 2287
 Fulford, B. 1251
 Fuller, M. E. 386
 Fulthorpe, R. R. 1513, 2417
 Fumi, M. D. 3313, 3330
 Funamizu, N. 399
 Fung, D. Y. C. 1982, 2822, 2871, 2983
 Funk, S. B. 2269
 Furlan, S. A. 516
 Furukawa, I. 192
 Furukawa, K. 397, 402, 1335, 1441, 3269
 Furumai, H. 1188, 1225
 Furuya, K. 2231
 Fuse, M. 2030
 Fuseler, K. 3852
 Fuska, J. 659
 Fusté, M. C. 480
 Fuster, D. J. 2572
 Futschik, K. 51
 Gaber, A. 2339
 Gabriel, J. 1575, 2574
 Gabriel, M. M. 2126
 Gabrieli, R. 3187
 Gachhui, R. 1577, 2594
 Gadd, G. M. 612, 649, 2262
 Gaddy, J. L. 1400
 Gadzella, T. A. 1092
 Gagnon, J. 322
 Gaikawari, R. 1806
 Gaikwad, J. S. 2755
 Gaillard-Martinie, B. 1830
 Gaines, A. G. 1137
 Gajendra Prasad 63
 Gaju, N. 1807
 Galassi, R. 1085, 2031, 2908
 Gale, P. 824
 Gale, P. M. 1361
 Gale, R. J. 3244
 Galicia, S. 3375
 Galil, N. 1508, 1692, 3770
 Galindo, E. 1677
 Galindo, I. 819
 Gall, B. 3256
 Gallagher, D. L. 3757
 Gallagher, J. 3523
 Gallagher, J. C. 2222
 Gallert, C. 588
 Gallert, G. 1504
 Gallhoff, G. 836, 1869, 1903
 Galli, E. 568
 Galli, F. A. 2936
 Gallinger, M. M. 2042
 Gallus, C. 521
 Galsomies, L. 3147
 Galushko, A. S. 3477
 Galzy, P. 1010
 Gama, Y. 1792
 Gambacorta, A. 3851
 Gambale, W. 72, 2934
 Gambrell, M. P. 2237
 Ganczarczyk, J. 444
 Ganczarczyk, J. J. 1392
 Gandhi, P. A. 3023
 Ganf, G. G. 1341, 1344
 Ganji, S. H. 2576
 Gao, Y. 2102
 Gao, Y. C. 1765
 Garau, V. L. 2573
 Garay, E. 1107
 Garcha, H. S. 2388
 Garcia, A. L. 1907
 Garcia, C. 493, 751
 Garcia, I. 700
 Garcia, J. L. 2670
 Garcia, M. C. 2055
 García, M. L. 2210
 Garcia, M. L. 869, 2055
 Garcia, O., Jr. 3686, 3688
 García, P. 929
 Garcia, P. A. 1184
 García, T. 872
 García-Armesto, R. 2054
 García-Barriónuevo, A. 2639
 García Encina, P. A. 3822
 García-Fernández, M. C. 250
 García García, P. 108
 García-Garibay, M. 3129
 Garcia-Heras, J. L. 1324
 García-Jares, C. 1992
 García-López, M. 250
 García López, M. L. 2054
 García-Olivares, A. J. 411
 García-Valdés, E. 3555
 Gardea-Torresdley, J. L. 3768
 Gardin, H. 3492
 Gardini, F. 2046, 2886, 3131
 Gardner, F. A. 991
 Garg, A. 3042
 Garg, K. L. 2108, 2221
 Garg, S. K. 2473
 Gargi Maheshwari 1462
 Gariépy, C. 35
 Garnham, G. W. 649
 Garre, M. I. 2267
 Garren, D. M. 950
 Garrick, R. C. 868
 Garrido, A. 696, 929, 1382
 Garrido Fernández, A. 108
 Garver, K. I. 3081
 Garzaroli, C. 2079
 Gashe, B. A. 2933
 Gaspard, P. 3372
 Gaspard, P. G. 3166
 Gast, R. K. 1008, 1896
 Gat, O. 3844
 Gaudet, I. D. 3308
 Gautam, A. R. 2227
 Gavasci, R. 1633
 Gay, J. O. 452
 Gayazov, R. R. 3564
 Gaylarde, C. C. 2804
 Gaze, J. E. 2141
 Gaze, R. H. 1238
 Gearhart, L. 3318
 Gecan, J. S. 939
 Geelhaar, L. A. 3456
 Gehin, A. 2718, 3537
 Geiger, J. P. 2099
 Geiger, W. F. 388
 Geisen, R. 230
 Gelderloos, A. B. 2695
 Gelhaye, E. 3537
 Gellens, V. 2300
 Gellera, A. 2580
 Gelosa, L. 2997
 Gelosa, M. 173
 Gemello, P. 2874
 Gemen, B. van 2186
 Geng, Q. H. 777
 Geng, X. L. 2660
 Genigeorgis, C. A. 1073
 Gennari, M. 1074
 Gennaro, P. di 568
 Gennery, M. 742
 Genova, M. S. 3138
 Genthe, B. 3189, 3191, 3904
 Georgakakis, D. 423
 George, K. E. 2669
 George, K. S. 2838
 George, R. H. 15
 George, S. 2667
 Georgiou, G. 788-789, 1551
 Geomaras, I. 1003, 2063
 Gerba, C. P. 237, 1071, 1144, 1746, 1780, 2773, 2776,

- 2868-2869, 2888, 2897, 3067,
3093-3094, 3147, 3161, 3255
Gercken, G. 548
Gerdes, D. L. 2938
Geresh, S. 2569
Gerhard, E. 481
Gerhardt, M. B. 3694
Gericke, B. 848
Germirli, F. 1652
Germonpré, R. 741
Gernaey, K. 2333
Gerome, P. 95
Gerrits, J. P. G. 1242
Gersberg, R. M. 562
Gerschenson, L. N. 2003
Gessler, A. 1458
Gettinby, G. 1972
Ghaly, A. E. 473, 3382
Gharsallah, N. 2342
Ghidoni, S. R. 2936
Ghildyal, N. P. 544
Ghiorse, W. C. 645, 3677
Ghobrial, F. H. 2363
Ghosh, D. K. 1577, 2594
Ghosh, P. 1198
Ghosh, S. 1385, 3320
Ghoshal, S. 2676
Ghrabi, A. 1207
Ghurye, G. L. 2377
Ghys, K. 3620
Giaccone, V. 1009, 2019, 2037
Giammanco, G. 2912
Gianetto, A. 1185
Giardina, P. 542
Giavedoni, P. 2047
Gibbons, H. L. 2224
Gibbs, M. D. 1831
Gibbs, R. A. 2895
Gibson, A. M. 1853
Gibson, C. 2128
Gibson, D. T. 286, 585, 1530,
2708, 3507, 3549
Gibson, E. 878
Gibson, F. C., III 1075
Gibson, G. 1972
Gibson, S. A. 1453
Gierschner, K. 1458
Giersig, M. 2602
Gies, G. 370, 376, 3288
Giese, J. 54
Giffel, M. C. te 2837
Giffhorn, F. 581
Gifçioğlu, G. 126
Giger, W. 635, 3636
Giggey, M. D. 2306
Gil, J. M. 681
Gilardi, G. 2106
Gilbert, M. 808
Gilbert, P. 3826
Gilbert, P. D. 3028
Gilbertson, R. L. 3575
Giles, P. S. 2832
Gill, B. 730
Gill, C. O. 959, 1025, 2052,
2130
Gill, T. 1892
Gillespie, R. 3294
Gillette, B. 1352, 1374
Gillham, R. W. 575
Gillies, J. A. 1399
Gillis, S. J. 3192
Gilmour, A. 158, 2882, 3045
Ginkel, C. G. van 2248
Ginkel, J. T. van 1242
Ginn, T. R. 2700
Ginneken, I. van 1854
Gioia, D. di 592, 595
Giolando, S. T. 1568
Giomo, A. 3048
Giorgio, G. di 3569
Giraffa, G. 1064
Giraldi, R. 1955
Giralt, J. 3407, 3420
Girard, C. 803
Girones, R. 3188
Giusti, L. 3796
Gladyshev, M. I. 1532
Glancer, M. 1636
Glas, I. 47
Glaser, J. A. 2534
Glatz, B. A. 1813
Glaus, M. A. 3558
Glénat, P. 3851
Glenn, J. 373
Glover, R. 1545
Glumoff, T. 3683
Glynn, O. 518
Gnesivo, C. 2836
Godchaux, W., III 651
Goebel, W. 12
Goenaga, X. 943
Gogotova, G. I. 2609
Goh, K. T. 2212
Gohil, V. S. 2189
Goins, R. V. 1105
Gokare, M. A. 1171
Gökçay, C. F. 1723
Gokhale, S. 1473
Golaszewski, G. 209
Gold, M. H. 508, 3883
Golden, M. H. 239, 1047, 3104
Goldie, F. 1120
Goldstein, J. 351
Goldstein, L. 2884
Goldstein, M. 3709
Goldstein, N. 1244, 2292, 2305
Golla, P. S. 1291
Gollakota, K. G. 2354, 3393
Golob, B. R. 3286
Golob, P. 2932
Golovleva, L. A. 1516, 1561,
3618, 3769
Golubev, V. I. 2770
Golubeva, O. V. 3404
Gomathinayagam, P. 1125
Gomes, D. J. 2753
Gomes, J. 555, 2753
Gomes, T. A. T. 1093, 1955
Gomez, H. 2947
Gómez, M. de J. Franco- 2375
Gómez, R. 2087
Gómez-Alarcón, G. 2116, 2118
Gomez-Alarcon, G. 202
Gomez-Almonte, N. 2169
Gomez-Bolea, A. 2124
Gomez-Lojero, C. 1767-1768
Gómez-Lucía, E. 1947
Gomez-Palma, L. F. 1123
Gómez-Ruiz, L. 3129
Gomyoda, M. 1889, 1910
Gonçalves, J. A. 1496
Gonçalves, R. F. 1657
Goncalves, R. F. 3258
Gönenc, I. E. 1634, 1645
Gong, F. 3377
Gong, P. 2364
Gong, S. F. 2972
Gongadze, G. M. 3179
Gönül, S. A. 2180
González, B. 1442
Gonzalez, B. 2042
González, C. 2054
Gonzalez, E. 2055
González, I. 872, 1050, 2827
Gonzalez, I. 2194
González, J. 85, 2827
Gonzalez, J. 2194
González, L. 3216
González, M. P. 3386
González, P. 1479
González, R. 810, 3375
Gonzalez, R. 2299
González-Candelas, L. 810
González-López, J. 2380, 2639
Gonzalez-Valero, J. F. 3617
González-Vila, F. J. 2113
Goodall, T. 857
Goodcare, R. 2205
Goodenough, P. W. 540
Goodman, A. E. 2188
Goodwin, J. A. S. 1675
Gooijer, K. D. de 3251
Gopal, K. 1915, 1917
Gopala Rao, K. R. 2993
Gopalan, R. 639, 1602
Gorbushina, A. A. 2112
Gordon, S. H. 605
Gori, E. 2114
Gorlach, K. 3202
Goss, M. J. 2230
Gossett, J. M. 2511
Goswami, B. B. 2967
Goszczynski, S. 1449
Goto, M. 1141
Gottschalk, G. 1415
Gough, M. C. 1976
Gould, G. W. 901
Gould, M. 369
Goulet, J. 3088
Gour, L. 878
Gourmelon, M. 274
Gousailles, M. 1261
Goverde, R. L. J. 254
Govers, H. A. J. 3472
Govi, M. 356
Govind, R. 2140, 2246
Govindasamy, V. 2785
Goyache, J. 1947
Goyal, S. M. 2786, 2957
Grabow, N. A. 3904
Grabow, W. O. K. 340, 3909
Grace, J. K. 189
Gracia, M. P. 1842
Grady, C. P. L. 1425
Grady, C. P. L., Jr. 1514, 3465
Graffham, A. J. 1543
Graham, A. 3120
Graham, N. J. D. 740
Gram, L. 1094, 1892
Grand, L. le 1657
Grandison, A. S. 1117, 2136,
2985
Grandjean, P. A. 1327
Granskog, L. 272
Grant, K. A. 1935
Grant, S. B. 2179
Gران, P. E. 1953
Grasmick, A. 1207
Grassi, G. 2812
Grassia, G. S. 2713
Gratier, D. 948
Graul, A. 1779
Graves, D. A. 3800
Graves, J. K. 1737
Graves, J. W. 732
Gray, D. I. 854, 2201, 3893
Gray, M. 3135
Gray, M. R. 323, 2702, 3459
Gray, R. T. 2838
Grbić-Galić, D. 1512
Grbić-Galić, D. 2584
Grbić-Galic, D. 1486
Grebtsov, Yu. I. 750
Grebuss, M. 353
Grechka, G. M. 1517
Greebe, R. P. 863
Green, F. B. 3694
Green, G. A. 630
Green, J. G. 742
Green, M. 477, 680, 1742,
1744, 2668, 2722, 3790
Greene, R. V. 605, 2469
Greenfield, P. F. 1219
Greer, C. W. 322, 559, 3410
Greer, G. G. 959, 978, 2979
Gregory, R. 3784
Gretlein, H. E. 2763, 3633
Grey, B. de 3693
Gribovskaya, I. V. 1532
Grice, K. G. 1996
Griebe, T. 2164, 3680
Griensven, L. J. L. D. van 1242
Griest, W. H. 2617
Griffin, G. J. L. 1540
Griffin, H. L. 2469
Griffin, M. 1969
Griffin, R. A. 1502
Griffis, C. L. 1005
Griffiths, M. W. 153, 2989
Griffoll, M. 3685
Griggiths, M. W. 1952
Grijpsperdt, K. 3331
Grimberg, S. J. 1209
Grimes, D. K. 2307
Grimit, L. 1882
Grinshpun, S. A. 2852, 3246
Grobbs, N. G. 541
Grobe, K. 1250
Grobe, S. 3029
Groenestijn, J. W. van 3267
Groff, K. A. 1170
Grogan, G. 2419
Grogan, H. A. 364
Grohmann, A. 2843, 3165
Grohmann, G. S. 3138, 3150
Grohs, B. M. 513, 1434
Grolmund, P. 3200
Grolle, K. C. F. 3488
Grolms, U. 1546
Groot, A. de 2522
Gros, H. 1263
Gross, J. B. 2423
Gross, A. C. 310
Gross, M. 2404
Gross, P. M. 1622
Gross, T. S. C. 225
Grotenhuis, J. T. C. 1600, 3561
Groubert, T. N. 937
Grover, S. 157
Grover, T. A. 271
Gruiz, K. 3230
Grunditz, C. 1816
Grüttner, H. 1629
Gschlossl, T. 1142
Gu, J. X. 3486
Gu, X. H. 1373
Gu, Y. 2547
Gu, Y. X. 3476
Gu JianXing 3486
Gu YongXiang 3476
Gualda Bueno, M. J. 1872
Guarro, J. 2845
Guamard, C. 742
Gubbins, B. 3631
Gudkov, A. V. 178
Guenther, R. B. 2456
Guerrero, F. J. 2219
Guerrero, I. 2036
Guerrero, L. 972
Guerrero, R. 1807
Guerrero, S. 2003
Guerzoni, M. E. 266, 2046,
2886, 3131
Guessab, M. 2273
Guiaud-Marigny, O. 2080
Guibal, E. 1664
Guignard, A. 2022
Guillard, G. 3082
Guijarro, A. 2148
Guilbert, S. 3514
Guillaud, J. F. 1135
Guillé, F. 582, 1469
Guillite, O. 2115, 2125
Guillot, E. 24
Guilloteau, J. A. 2312
Guillou, J. P. 38
Guiot, S. R. 2644, 3257
Gural, D. 1398
Guitonas, A. 1681
Gujer, W. 1205, 1287, 1290,
1321, 1615, 3712, 3734-3736,
3751
Guldner, C. 1194
Guleri, R. L. 2346, 2355
Gunaratna, K. R. 2785
Gunaseelan, V. N. 2390, 2393
Gunasekaran, P. 1834
Gunasinghe, C. P. G. L. 870
Gunning, P. A. 1880-1881
Gunsagar Dixit 2421
Gunter, H. 1608
Günther, A. 3832
Günther, C. 313
Guo, B. Z. 1974
Guo, A. 236, 302
Gupta, A. B. 3722
Gupta, K. G. 627
Gupta, M. 302, 811, 2589
Gupta, R. 818, 1591
Gupta, R. K. 2346
Gupta, S. C. 2382
Gupta, S. K. 1844, 3722, 3800
Gurvech, P. 3277, 3471
Gurjar, M. 3647
Gutenmann, W. H. 620
Guth, B. E. C. 1093, 1955
Guthrie, J. A. 2056, 2949
Gutiérrez, A. 2113
Gutierrez, C. 1612
Gutierrez, G. 3345
Gutiérrez-Correa, M. 3510
Gutnick, D. L. 786
Guwy, A. J. 3184
Guyot, J. P. 1436, 3345

- Gyürék, L. 2824
 Haaf, D. 1616
 Haandel, A. C. van 2798
 Habu, N. 557
 Hack, C. J. 1411
 Hacker, J. 13
 Hackett, T. J. 2593
 Hackney, C. R. 830
 Hadar, Y. 3519, 3521
 Haddadin, J. 2677
 Haddock, J. D. 496, 585, 1530
 Haelst, A. G. van 3472
 Haeseler, F. 1847
 Haessler, M. 1779
 Hagedorn-Olsen, C. 1618
 Hagen, C. J. 120
 Hagen, J. C. 2711
 Häggblom, M. M. 1528, 3422, 3438, 3596
 Haghighi-Podeh, M. R. 3661
 Haglund, J. 1997
 Hagtvædt, T. 240
 Hahn, G. 168
 Hahn, H. H. 2797
 Hahn-Hägerdal, B. 474, 3379
 Hahnke, K. 2537
 Haider, T. 2834
 Haidour, A. 3556
 Haigh, M. D. F. 835
 Haikara, A. 3121
 Haikola, B. 319
 Haines, C. P. 2932
 Haines, J. 2308, 3173
 Haines, J. R. 2501
 Haishima, Y. 1948
 Hajarnis, S. R. 1386
 Haldane, G. M. 1203
 Haldenwang, L. 1743
 Hales, S. G. 2581
 Halfmeier, H. 638
 Haling, C. S. 3318
 Hall, D. O. 488
 Hall, E. 401
 Hall, E. R. 1703, 2655
 Hall, G. S. 982
 Hall, J. E. 342
 Hall, K. J. 1378
 Hall, N. H. 2885
 Hall, P. A. 1951
 Hall, R. M. 3074
 Hall, T. 3784
 Hall, W. R. 2938
 Halling-Sørensen, B. 1278, 1298, 1646-1648, 1867
 Halliwell, G. 2475
 Halliwell, N. 2475
 Hallman, J. L. 974
 Hallmann, R. 744
 Halstead, J. M. 3278
 Haltunen, S. 1711
 Haluška, L. 2414, 2466-2467
 Hamad, M. A. 765
 Hamaguchi, T. 1232
 Hamasaki, A. 3886
 Hamasaki, T. 2859
 Hamsch, B. 2905
 Hamdy, M. K. 1046
 Hamer, G. 341
 Hamid, S. N. B. A. 1918
 Hamilton, J. T. G. 518, 2751
 Hamilton, M. A. E. 992
 Hammack, R. W. 745
 Hammack, T. S. 1930, 2870
 Hammer, D. A. 1332
 Hammer, K. 3849
 Hammer, K. D. 2232
 Hammes, W. P. 244, 3610
 Hammond, E. G. 1813
 Hammouda, O. 2339
 Hamoda, M. 347
 Hamon, M. 1260, 2313
 Hampson, J. W. 1875
 Hamza, M. A. 1475
 Hamzah, R. Y. 1490
 Han, J. 2710
 Han, T. J. 1130
 Hanaki, K. 385, 1269, 2431, 3737
 Handumrongkul, C. 121
 Häner, A. 341
 Hanert, H. H. 3568
 Hang, Y. D. 2157, 3384
 Hanlon, G. W. 1685
 Hanna, K. M. 3266
 Hanna, M. L. 3223
 Hannak, C. 1458
 Hannibal, L. 1402
 Hänninen, K. 3302
 Hänninen, M. L. 2830
 Hanowell, R. 2224
 Hanselmann, K. 2550
 Hansen, F. 3699
 Hansen, J. L. 678, 1151
 Hansen, J. W. 3692
 Hansen, R. C. 353, 2298
 Hansen, T. A. 1797
 Hansford, G. S. 1218, 1286
 Hanson, R. L. 664
 Hanssen, H. P. 2150
 Hansson, Y. 1816
 Hao, O. J. 336, 1265, 1611, 2275
 Hao, Y. Y. 264, 961
 Haque, A. K. M. A. 2301
 Hara, A. 504
 Harada, H. 431, 1187, 1268, 1788, 2730
 Haraguchi, T. 2493
 Haraya, K. 2459
 Harayama, S. 3552
 Harder, W. 3605
 Hardin, M. D. 968, 2044
 Hardman, D. J. 3432, 3434
 Hardoyo 3753
 Hardwood, C. S. 774, 3413, 3437
 Harewood, P. 3064
 Hargis, M. 591
 Harker, A. R. 3429
 Harmon, J. L. 3349
 Harms, H. 3455
 Harmsen, H. J. M. 3853
 Haro, A. 3439
 Harper, B. G. 2890
 Harper, D. B. 518, 2751
 Harper, E. R. 350
 Harpin, S. 803
 Harremoës, P. 678, 761, 1277, 1395, 1618, 1641
 Harremoës, P. 1201, 1206
 Harrington, C. S. 3895
 Harrington, D. 2981-2982
 Harrington, J. F. 2832
 Harris, W. J. 2203
 Harrison, M. A. 87, 950, 968, 1920
 Harry-O'kuru, H. 605
 Harsono, K. D. 3119
 Hartikainen, P. 2555
 Hartley, B. S. 3766
 Hartley, N. J. 2911
 Hartman, P. A. 1043-1045, 1112, 1785
 Hartmann, P. 1819
 Hartmans, S. 3251
 Harun-Or-Rashid, M. 2760-2761
 Harvey, J. 2882
 Harwell, J. H. 2402
 Hasegawa, A. 174
 Hasegawa, I. 1239
 Hasegawa, K. 1478, 2478, 3531
 Hasegawa, S. 1199, 2225
 Hashem, A. M. 3378
 Hashim, M. A. 3281
 Hashimoto, A. 323, 3459
 Hashimoto, A. G. 1387
 Hashimoto, M. 607
 Hashimoto, S. 2476
 Hassan, E. S. 1138
 Hasselblad, S. 297
 Hastings, J. W. 58
 Hatano, K. 1356
 Hatano, S. 1939
 Hatha, A. A. M. 1125, 3056
 Hathaway, C. J. 3333
 Hatheway, C. 2947
 Hatheway, C. L. 2013
 Hatsumata, S. 2330
 Hauschild, I. 3607
 Hauser, D. 38
 Hausinger, R. 622
 Hausler, W. J., Jr. 2885
 Have, P. J. W. ten 1764, 2687
 Havelaar, A. H. 2242, 2902
 Hawash, S. 765
 Hawkes, D. L. 3184
 Hawkes, F. 2315
 Hawkes, F. R. 701, 3184
 Hawkey, P. M. 1870
 Hay, J. 1901
 Hayakawa, I. 219
 Hayakawa, T. 2493
 Hayasaka, S. S. 1063
 Hayashi, S. 2733, 3108
 Hayashi, T. 2560
 Hayashida, S. 1441
 Hayes, R. 1741
 Hayes, T. L. 310
 Hayn, M. 548, 555, 2765
 Hayward, A. C. 2716
 Hazelden, K. 919
 Hazeleger, W. C. 292
 Hazen, T. C. 3436, 3474
 Hazeu, W. 2732
 Hazlewood, G. P. 543
 Hazzaa, M. M. 897
 He, Y. L. 2660, 3776
 He YanLing 3776
 Hearnberger, J. O. 945, 2015
 Hecht, S. 1231
 Hecht, V. 3475, 3616
 Heck, P. E. 1209, 1535, 2545
 Hedley, M. J. 755, 1770
 Hedrick, D. B. 3398
 Héduit, A. 617
 Hédut, A. 2256
 Hederik, D. 3157
 Heesen, D. te 3362
 Heessels, E. 1471, 3561
 Hefnawy, Y. A. 2091
 Hegemann, W. 1194, 1863
 Heggart, H. 999
 Heidenreich, E. 73
 Heijman, C. G. 3558
 Heijnen, J. J. 686, 1631, 1659, 2272, 2279, 2281, 3326, 3749, 3752
 Heimann, M. F. 111
 Heimann, P. 129
 Heinemann, T. A. 1266
 Heinonen-Tanski, H. 767
 Heinritz, N. J. 2609
 Heinze, T. M. 1495
 Heinze, U. 3417
 Heinzle, E. 1733-1734, 3458, 3538
 Heir, E. 3110
 Heitzer, A. 2532, 3235
 Hejzlar, J. 1128
 Helke, D. M. 2109
 Hellstrom, B. G. 1201
 Helmreich, B. 1728
 Helvenston, M. C. 1452
 Hem, L. J. 2276, 2629
 Hemond, H. F. 3663
 Hempel, D. C. 3427
 Hemphill, J. B. 1054, 1090
 Hen, Y. 2689, 3811
 Henderson, C. 870
 Hendricks, C. W. 3892
 Hendriksen, H. V. 2530
 Hendrikz, J. K. 2823
 Henis, Y. 3277, 3471, 3624
 Henle, T. 1103
 Henneberry, S. R. 3911
 Henning, K. 2413
 Henriette, C. 343
 Henriksson, G. 2482
 Henry, B. E. 3089
 Henry, J. G. 2436
 Henry, K. 3563
 Henrysson, T. 2449
 Henze, M. 684, 689, 1147, 1201, 1613, 2257, 3314, 3711
 Herath, G. 3140
 Herbes, S. E. 3565
 Herman, D. C. 1488, 3597
 Hermon, B. M. S. 2123
 Hermoni, I. 2507
 Hernández, B. 3375
 Hernandez, B. S. 3489
 Hernandez, C. 2890
 Hernández, E. P. S. 722
 Hernández, M. 2005
 Hernandez, M. 1317
 Hernández, P. E. 872
 Hernández-Delgado, E. A. 3190
 Hernández-Herrero, M. 117, 119
 Hernández-López, J. 2844
 Hernández-Marín, M. 3016
 Hernandez-Marine, M. 2122
 Hernández Nodarse, M. T. 718
 Herndon, F. G. 486
 Herold, C. P. 3402
 Heron, J. K. 629
 Herrera, A. 89
 Herrling, B. 1160
 Herrmann, A. M. 2782
 Herrmann, H. 1448, 2537
 Herrmann, I. F. 1018
 Herwig, R. P. 1527
 Hespanhol, I. 288
 Hespell, R. B. 794
 Hess, T. F. 1537
 Hesselink, P. G. M. 3267
 Hessen, D. O. 1124
 Heuer, J. J. M. B. 3017
 Heuvel, J. C. van den 2350
 Heuvelink, A. 1091
 Hey, D. L. 1347
 Heyder, B. de 2516
 Hibbs, R. J., Jr. 2013
 Hickey, M. 59
 Hickey, R. F. 437, 2527
 Hickey, W. J. 2572, 3498, 3562
 Hidalgo, P. 268
 Higashi, K. 1627
 Higginbotham, J. N. 2840
 Higgins, I. J. 3691
 Hijarrubia, M. J. 2005
 Hilbert, T. A. 3115
 Hildebrandt, G. 148
 Hildebrandt, G. 32
 Hill, P. 986
 Hill, R. A. 570
 Hill, R. T. 3360
 Hill, W. E. 1846
 Hillers, V. 6
 Hills, B. P. 23, 3116
 Himmelbloom, B. H. 1397
 Himmel, M. E. 2386, 3914
 Hinchee, R. E. 309, 832, 2793, 3240
 Hindmarsh, P. S. 2932
 Hingst, V. 3053
 Hinshalwood, G. 3374
 Hinteregger, C. 784
 Hintikka, E. L. 204
 Hinton, M. 1793, 1967, 3027
 Hioki, J. I. 2406
 Hirai, H. 2657
 Hirai, M. 3781
 Hiraishi, A. 746, 1823, 3900
 Hirata, K. 2358
 Hirata, T. 2894
 Hirayama, K. 3585
 Hirn, J. 986
 Hirose, J. 1441, 2733
 Hirvi, T. 986
 Hitchins, A. D. 3010
 Hjörleifsdóttir, S. 1080
 Ho, C. H. 2617
 Ho, G. 737-738
 Hoad, M. 2878
 Hoaki, T. 3545
 Hobson, J. 3057
 Hobson, P. N. 797
 Hodge, D. S. 3247
 Hodge, J. P. 2185
 Hodgson, A. E. 3826
 Hodgson, B. 211
 Hoekstra, J. 2837
 Hoelting, F. B. 1405
 Hoepfel, R. E. 309
 Höfelein, C. 884
 Hoff, R. Z. 3214
 Hoffmeister, D. 3316
 Hofken, M. 1778
 Hofstra, H. 2781
 Hogan, E. 2812
 Hogg, T. 93
 Hoitink, H. A. J. 353
 Holah, J. T. 1057
 Holan, Z. R. 2590, 3665

- Holben, W. E. 3621
 Holck, A. 128, 3863
 Holck, A. L. 3110
 Holder, G. A. 1191
 Holder-Franklin, M. A. 314
 Holecová, V. 2467
 Holland, P. J. 1041
 Hollander, A. 3157
 Holländer, R. 22
 Holle, P. M. van 749, 2674
 Hollender, J. 3589
 Höller, C. 1858
 Hollesen, L. 1277
 Holley, R. 3897
 Holliger, C. 1801, 3482, 3504, 3558
 Holló, J. 1180
 Holmes, C. F. B. 3095
 Holmes, D. S. 3678
 Holmes, H. 1252
 Holmes, P. 2896
 Holst, O. 3799, 3873
 Holt, D. L. 2169
 Holt, P. S. 1896
 Holt, R. A. 570
 Holt, S. M. 1785
 Holubec, M. 312
 Holy, A. von 46, 58, 143-144, 215, 267, 981, 1003, 2021, 2063, 2970
 Holzapfel, W. H. 143, 215, 230, 2011, 2175
 Homolka, L. 1013
 Honda, H. 772
 Hong, C. C. 2565
 Hong, J. 641
 Hongo, I. 1239
 Hongve, D. 226
 Honorato, B. 25
 Hons, F. M. 3370
 Hoog, G. S. de 2120
 Hooker, B. S. 511, 663, 3415
 Hoover, M. T. 1349
 Hoover, P. A. 3586
 Hooyberghs, L. 3502
 Hopkins, G. D. 2526
 Hopp, J. 3589
 Hopper, D. J. 2544, 3497
 Hopper, D. R. 317
 Hoque, E. 3634
 Horan, N. J. 1299
 Horiike, K. 618
 Horiitsu, H. 466
 Horn, H. 1617
 Horňák, V. 2467
 Hornby, H. 99
 Horne, E. 2308
 Hornes, E. 2876
 Hornez, J. P. 1993
 Hornsby, L. A. 1299
 Horny, P. 1538
 Horowitz, J. B. 1489
 Horstmann, U. 1133
 Horton, J. R. 1530
 HortScience 828
 Horváth, É. 84
 Horvath-Gordon, M. 1431
 Hosaka, Y. 2030
 Hosetti, B. B. 1208
 Hoshina, K. 1889
 Hosokawa, Y. 1335
 Hosomi, M. 448
 Hosono, A. 924
 Hotta, Y. 2509
 Hou, C. T. 1428
 Houghton, J. E. 774
 House, C. H. 1349
 House, J. I. 488
 Houten, R. T. van 2603
 Houtsma, P. C. 1091
 Houwen, F. 1558
 Houwen, F. P. 749
 Howard, P. H. 304, 1459, 2244
 Howgrave-Graham, A. R. 1663
 Hoyas, A. 2233
 Hršak, D. 2584
 Hršak, D. 3431
 Hruđey, S. E. 2702, 3149
 Hseu, T. H. 547
 Hsu, L. Y. 283
 Hsu, Y. L. 2535
 Hu, H. Y. 1281
 Hu, T. L. 1738
 Hu, W. S. 1560
 Hu, Y. 3723
 Hu, Z. C. 616
 Huang, C. 1583
 Huang, C. M. 1305, 3252
 Huang, J. 336, 3344
 Huang, J. K. 3831
 Huang, L. 547
 Huang, S. H. 1082
 Huang, Y. W. 950
 Huber, M. S. 1071, 2773
 Huber, R. 3864
 Hubert, J. C. 3690
 Hubert, W. A. 2734
 Huck, P. M. 3786
 Huckabay, H. K. 2768
 Hudson, C. R. 1246
 Hudson, J. A. 960, 962
 Hudson, R. 1820
 Hueber, A. E. 2244
 Huertas, M. J. 3556
 Hugenholtz, J. 3082
 Hugenholtz, P. 2823, 3743
 Hughes, D. J. 2129
 Hughes, J. B. 498, 3557
 Hughes, M. N. 2132
 Hugley, B. 3892
 Hughes, B. 2826
 Hui, H. H. 1221
 Huis in 't Veld, J. H. J. 254
 Huis in't Veld, J. H. J. 1059, 1061, 2750
 Huistra, A. 3491
 Huizing, H. J. 541
 Hulscher, W. S. 3394
 Hulshoff Pol, L. W. 2603
 Hultman, B. 1603
 Humber, J. Y. 1951
 Humpheson, L. 883
 Humphrey, A. E. 1707
 Humphrey, T. J. 1886, 2071, 2878, 3123
 Humphreys, P. N. 2632
 Humphries, E. G. 2952
 Hund, K. 1546
 Hung, Y. C. 87
 Hung, Y. T. 2320
 Hunik, J. H. 3832
 Hunt, B. A. 305
 Hunter, E. A. 159
 Hunter, G. D. 3144
 Hunter, J. B. 3426
 Hunter, P. R. 99
 Hunter, P. R. 2899
 Huot, R. 3063
 Hurst, C. J. 3093
 Huss, H. H. 953, 1066
 Hussain, A. A. 2129
 Husson, G. 2866
 Hustead, D. L. 42, 879
 Hutchins, S. R. 1444
 Hüttnan, M. 1635, 1678
 Hutson, R. 270
 Hutson, R. A. 1957
 Hutt, A. J. 1685
 Hüttenhain, S. H. 3180
 Hüttermann, A. 1465
 Huys, G. 1911
 Hvala, K. 2184
 Hvítved-Jacobsen, T. 761, 1445, 3356, 3362
 Hwang, C. 3036
 Hwang, C. A. 67, 882, 2067, 2202
 Hwang, C. P. 1399
 Hwang, W. I. 3875-3876
 Hwang, Y. 385
 Hyánek, L. 1772
 Hyman, M. R. 2456
 Iannotta, V. 2912
 Ibatullin, R. R. 3404
 Iben, I. E. T. 3599
 Ibiari, N. El 765
 Iborra, J. L. 609
 Ibrahim, G. 3322
 Ibrahim, N. 1984
 Ibrahim, S. A. 1067
 Ichikawa, H. 3587
 Ichikawa, M. 2326
 Ichikawa, T. 466
 Idris, A. H. 1186
 Iefuji, H. 1835
 Ihsan-ul-Haq 2497
 Iijima, N. 2030
 Iijima, S. 772
 Imori, T. 1697
 Imura, Y. 1835
 Iiyama, K. 350
 Iyama, J. Y. 1997
 Ikbai 695
 Ike, A. 402
 Ike, M. 2406, 3640
 Ikeda, Y. 1424
 Ikuta, Y. 3886
 Ilbäck, N. G. 889
 Ilmer, P. 3747
 Imagawa, M. 594
 Imai, A. 456
 Imai, H. 1297
 Imai, T. 1225
 Imam, S. H. 605, 1539, 2469
 Ina, K. 2134
 Inam-ul-Haq, M. 2497
 Inamori, Y. 456
 Ince, O. 433, 3343
 Incerti, C. 1123
 India, NSI Officers' & Technical Staff Welfare Association 713
 Ingham, S. C. 965, 1039, 1092
 Ingledew, W. M. 2387
 Inglis, B. 50
 Ingram, L. O. 2567
 Iñiguez-Covarrubias, G. 2372, 2375
 Inniss, W. E. 2405
 Inoue, N. 115
 Inoue, R. 1017
 Inoue, S. 1839, 3346
 Inoue, Y. 762, 1786
 Inoue, Z. 3716
 In't Veld, H. 1056
 In't Veld, P. H. 1942
 International Dairy Federation 833
 Inza, I. 2845
 Irastorza, A. 1990
 Ireland, J. C. 2161
 Iriberrí, J. 1069
 Irvine, R. L. 1515, 1694, 2278, 3219
 Irwin, D. 3879
 Irwin, J. 3255
 Isaacs, N. 2146
 Isaacs, N. S. 3098
 Isaacs, S. 684, 2257
 Isaacs, S. H. 682
 Ishaq, A. M. 1270
 Isherwood, H. A. 1663
 Ishida, T. 618
 Ishigami, Y. 1792
 Ishihara, M. 556
 Ishikawa, K. 3781
 Ishikura, M. 2225
 Ishiwata, N. 2198
 Ishiwata, Y. 717
 Ishizaki, A. 3478, 3522
 Islam, M. R. 633
 Islam, S. 1745
 Ismail, M. A. 83
 Issacs, S. H. 3711
 Istok, J. D. 315
 Ito, S. 503, 2398
 Ito, Y. 607
 Itoh, K. 1393
 Itrich, N. 3649
 Iturburu, A. L. 1069
 Ivanov, M. V. 206, 3404
 Ivanova, A. E. 3404
 Ivanova, S. Z. 571
 Ivanović, D. 131
 Iversen, J. J. L. 1181
 Iwabuchi, K. 3280
 Iwahori, K. 2326, 2407
 Iwasaki, K. 719
 Iwase, K. 3280
 Iyengar, L. 2601, 3654
 Izard, D. 1912
 Izod, E. J. 340, 3909
 Izquierdo, J. M. 2000
 Izumori, K. 475
 Jablonski, P. 591
 Jaccard, L. 1255
 Jacinto Hernández, L. 718
 Jack, T. R. 3895
 Jackson, A. M. 1825
 Jackson, B. J. 1850
 Jackson, J. L. 1907
 Jackson, K. J. 3223
 Jackson, M. A. 1428
 Jacobs, L. J. A. M. 1315
 Jacobsen, B. N. 3576
 Jacobsen, H. 2160
 Jacoby, J. M. 2224
 Jaffar, M. 1965
 Jagadish, K. S. 484
 Jager, E. 1240, 1257
 Jäggli, M. 21
 Jagjit Singh 1120
 Jahnig, D. 3446
 Jahnke, M. 2439
 Jain, A. 2473
 Jain, K. K. 2108, 2221
 Jain, M. K. 437, 3600
 Jaiswal, P. K. 1923
 Jameel, H. 1737
 James, N. 1621
 James, S. 270
 James, W. A. 3008
 James-Davis, L. A. 1058
 Jamroz, T. 709
 Jand, S. K. 70-71
 Jang, K. L. 3870
 Jang, Y. H. 3539
 Janyani, K. L. 1159, 2379
 Janning, B. 3906
 Janse, B. J. H. 1547
 Jansen, J. L. C. 3704, 3726
 Jansen, J. la C. 1620
 Janssen, A. 1600
 Janssen, A. J. H. 3689
 Janssen, D. B. 1437, 2462, 3491, 3503, 3842
 Janssen, P. 1911
 Janssen, P. H. 2418, 3485
 Jansson, K. 1713
 Januszczek, R. 590
 Janzen, R. A. 1480
 Jardin, N. 2634
 Jardine, F. M. 284
 Järvinen, K. T. 2530, 2555
 Järvinen, S. 1713
 Javid, A. M. 2320
 Javanjal, S. S. 1150
 Javier Hernández, F. 1947
 Jayachandran, K. 1752
 Jayaraman, K. 2667
 Jean, G. le 877
 Jeanthon, C. 3851
 Jeffries, T. W. 3524
 Jehl-Pietri, C. 2826
 Jell, A. 3801
 Jellal, M. 2786
 Jellison, J. 556
 Jermi, T. 944
 Jendrossek, D. 1443, 3613
 Jeníček, P. 1679, 1684
 Jenkins, A. 1127
 Jenkins, D. 1317
 Jensen, A. B. 2604, 2606-2607
 Jensen, B. K. 575, 2520-2521
 Jensen, J. N. 2575
 Jensen, K. N. 1201
 Jensen, P. R. 3849
 Jenson, I. 2155
 Jeong, D. K. 1095
 Jeong, Y. K. 3539
 Jeppesen, V. F. 1066
 Jeppsson, H. 474
 Jepsen, S. E. 1620, 3726
 Jeremiah, L. E. 978
 Jerger, D. E. 2811
 Jericho, K. W. F. 2045
 Jermini, M. 21
 Jerngklingchan, J. 152, 1979
 Jernigan, R. 3577
 Jesenská, Z. 1011
 Jeune, C. le 2781
 Jewell, W. J. 486, 3574
 Jewett, D. G. 3115
 Jha, K. 2935

- Jhung, J. K. 3250
 Jian, H. 1280
 Jiang, H. 1597
 Jianlong, W. 2549
 Jiffels, R. H. 3725
 Jiménez, B. 2626
 Jiménez, L. 731
 Jing, W. 3473
 Jinneman, K. 940
 Jinneman, K. G. 1933
 Jirillo, R. 2243
 Jochemsen, A. 3689
 Jofre, J. 3188
 Johansen, C. 1094, 1892
 Johansson, B. 2593
 Johansson, G. 147
 Johnsen, G. 272
 Johnson, B. F. 1826
 Johnson, C. H. 2720, 3195, 3899
 Johnson, D. B. 3791
 Johnson, G. C. 2784
 Johnson, H. W. 1156
 Johnson, H. W. M. G. 815
 Johnson, K. A. 2314-2315
 Johnson, S. A. 2720
 Johnson, S. T. 284
 Johnson, V. 2500, 3408
 Johnsonbaugh, D. 3658
 Johnston, P. A. 3361
 Johnstone, D. L. 1579
 Johri, B. N. 2477
 Joly, J. 3227
 Jones, A. M. 2387
 Jones, A. P. 59
 Jones, C. 3877
 Jones, C. E. 3124
 Jones, D. 3124
 Jones, D. D. 2961
 Jones, F. T. 2077
 Jones, G. A. 965
 Jones, G. J. 3117
 Jones, I. 1621
 Jones, K. H. 2544, 3497
 Jones, L. P. 1502
 Jones, M. V. 1932
 Jones, P. W. 151
 Jones, T. 2130
 Jones, W. J. 505, 514, 1457
 Jones, W. L. 666, 820
 Jong, E. de 1471, 3182, 3561, 3881
 Jong, P. de 3701
 Jongejan, H. 2522
 Jönsson, K. 1603, 2618, 3706
 Jönsson, L. E. 2618
 Jönsson, M. 1710
 Jonsyn, F. E. 124
 Joo, Y. H. 1769
 Jorand, F. 3321
 Jordan, C. 1129
 Jordano, R. 2088
 Jordano Salinas, R. 1872
 Jordão, C. P. 3888-3889
 Jördening, H. J. 3861
 Joret, J. C. 343
 Jørgensen, B. B. 3181
 Jørgensen, C. 2520-2521
 Jørgensen, F. 1079
 Jørgensen, L. 1629
 Jørgensen, P. E. 1309
 Jørgensen, S. E. 1867
 Joseph, R. 490, 698
 Josephson, K. L. 2776
 Joshi, B. 3484
 Joshi, D. K. 508
 Joshi, M. 2371
 Joshi, S. R. 2379
 Joshi, V. K. 3376
 Joshi-Tope, G. 2714
 Joshua, R. S. 1246
 Joston, L. M. 2383
 Jou, C. J. 597
 Jousimies-Somer, H. R. 210
 Jovanovich, M. C. 3223
 Jovelić, V. 131
 Jowett, E. C. 1775
 Joyce, T. W. 732, 1442, 1737
 Ju, L. K. 3264
 Juanico, M. 335, 417
 Judson, F. 2947
 Jui, P. Y. 1254
 Jukes, A. A. 1562
 June, G. 1930
 June, G. A. 2870
 Juneja, V. K. 134, 998, 2041, 2092
 Jung, E. D. 3879
 Jung, J. Y. 3814
 Jung, K. H. 2505
 Jung, K. Y. 1769
 Jung, R. 36
 Jung, S. 2318
 Jung JinYoung 3814
 Junge, S. A. 1691
 Jungmann, D. 1804
 Juozaitis, A. 2852
 Jurasek, L. 3778
 Juriš, P. 289
 Juven, B. 1977
 Juven, B. J. 1051
 Jwanny, E. W. 2367, 3759
 Ka, J. O. 780
 Kaa, C. van der 3689
 Kaal, E. E. J. 3881
 Kabbalo, H. P. 2553
 Kabbasli, I. 1559
 Kadam, R. V. 713
 Kadkhodayan, M. 2501
 Kadlec, R. H. 1347
 Kadri, M. 3582
 Kaewsaengtham, M. 1215
 Kafkewitz, D. 597, 2425, 2546, 3374, 3554
 Kahru, M. 1133
 Kai, T. 2712
 Kaijser, B. 2946
 Kaiser, S. K. 1680
 Kaitala, S. 142
 Kakichi, N. 1627
 Kakouri, A. 154, 983
 Kakudo, S. 3608
 Kalab, M. 146
 Kalaichelvan, P. T. 2485
 Kalaiselvi, R. 1468
 Kalakoutska, A. N. 3717
 Kalathenos, P. 1921, 3126
 Kalb, K. 1606
 Kalfewitz, D. 2433
 Kalicharan, R. 3009
 Kallander, K. 2947
 Kalra, M. S. 1833
 Kaltenthaler, E. C. 1876
 Kalya, A. V. 3020
 Kalyuzhnyi, S. V. 3807
 Kamagata, Y. 652, 3900
 Kamasawa, N. 504
 Kamat, A. S. 1037
 Kamata, S. I. 1627
 Kameya, T. 3451-3452
 Kamiko, N. 2860
 Kamiya, A. 2098, 2165
 Kampbell, D. H. 2506
 Kämpfer, P. 813, 1688, 3209, 3242, 3316
 Kamra, D. N. 760, 1430, 2752
 Kanai, M. 1919
 Kanarek, A. 3389, 3709
 Kanda, T. 546
 Kandel, X. 1260
 Kandeler, E. 530
 Kaneko, M. 2865, 2894
 Kaneko, R. 1697
 Kanenaka, R. 2875
 Kaneshiro, T. 2438, 3831
 Kang, G. 3592
 Kang, S. O. 459
 Kang, S. W. 3532
 Kanner, J. 1051
 Kanno, T. 219
 Kantt, C. A. 116
 Kanwar, S. S. 2346, 2355, 2388
 Kapadnis, B. P. 1473
 Kapahi, R. 2404
 Kapetanios, E. 2790
 Kaplan, H. 2105
 Kaplan, A. 2181
 Kapeler, J. 1287, 1290, 1321
 Kapperud, G. 2876
 Kapplmüller, J. 555
 Karaioannoglou, P. R. 2065
 Karande, A. A. 190
 Karani, H. 759
 Karanth, N. G. K. 3622, 3902
 Karapinar, M. 2180
 Karathanasis, A. D. 3670
 Karbowska, J. 3005
 Kargi, F. 2316
 Karib, H. 2032
 Karigar, C. S. 2576
 Karim, M. I. A. 1984
 Karim, M. N. 3528
 Karlsson, H. T. 3799
 Karlsson, S. 1544, 1548
 Karpilova, I. U. 1594
 Karsa, D. R. 2795
 Kartashov, V. I. 224
 Karunaratne, S. H. P. G. 3357
 Karwoski, M. 2994
 Kasai, N. 465, 1503
 Kasapgil, B. 433, 3343
 Kashima, M. 1919
 Kashino, Y. 2493
 Kashiwagi, N. 2430
 Kashket, E. R. 3848
 Kashmanian, R. M. 352, 1249, 1481
 Kaskens, H. J. 3017
 Kaspar, C. W. 837, 915, 1053, 3119
 Kašperek, V. 3718
 Kaspersson, A. S. 2907
 Kastner, C. L. 969, 2983
 Kästner, M. 1491
 Katamune, K. 3522
 Kataoka, K. 2406
 Katayama, A. 628
 Katayama, Y. 2565
 Katayama-Hirayama, K. 3585
 Kathariou, S. 2875
 Kathuria, P. C. 70-71
 Kato, A. 517
 Kato, F. 2760-2761
 Kato, J. 2483, 3753
 Kato, K. 3609
 Kato, M. 2268, 3545
 Kato, M. T. 348
 Kator, H. 276
 Katori, K. 2225
 Katsuoka, M. 221
 Katusin-Razem, B. 842
 Katz, A. 298
 Katz, S. E. 1938
 Katzen, R. 2498
 Katzenelson, E. 3032
 Kaufman, E. N. 3798
 Kaul, S. N. 2286, 2665
 Kaulfers, P. M. 3054
 Kausar, T. 176
 Kautter, D. A. 2008
 Kavanaugh, R. G. 1817
 Kavita Vasdev 2664
 Kawaguchi, A. 1017
 Kawaguchi, T. 2383, 2766
 Kawai, K. 466
 Kawai, S. 2565
 Kawai, T. 2492
 Kawamura, K. 2894
 Kawamura, O. 174
 Kay, D. 1127
 Kay, M. J. 1019
 Kaya, V. M. 2274
 Kaya, Z. 2142
 Kayser, R. 671, 1294
 Kaysner, C. A. 1846
 Ke, J. S. 1988
 Kearney, R. 1247
 Kearney, T. E. 290
 Kee, K. C. 561
 Keener, H. M. 353, 2298
 Keesman, K. J. 408
 Keevil, C. W. 1906, 1916, 3034
 Kehres, B. 357
 Keiding, K. 1288, 1614, 1856
 Keinath, A. 3180
 Kekos, D. 3612
 Kellam, J. L. 3266
 Kelleher, M. 3354
 Keller, B. H. I. 2090
 Keller, C. 3212
 Keller, J. 3743
 Kelley, R. L. 3449
 Kelley, S. 3602
 Kelley, T. R. 2240
 Kelly, D. P. 658
 Kelly, L. A. 1972
 Kelly, R. M. 1802, 2614
 Kelly, S. 3283
 Kelman, A. 928
 Kemp, J. S. 1927
 Kempf, J. L. 2885
 Kenefick, L. 3439
 Kenefick, S. L. 3149
 Kennedy, J. F. 693, 3249
 Kennedy, K. J. 347, 600, 3588
 Kennes, C. 2541, 3491
 Kenney, J. A. 3773
 Kenney, P. B. 969
 Keppler, K. 230
 Kerai, H. 742
 Kerem, Z. 3521
 Keristovsky, G. 2569
 Kermode, R. I. 748
 Kerneis, A. 3037
 Kerr, K. G. 1870
 Kern-Kespersen, J. P. 689
 Kersten, P. J. 1836
 Kersters, I. 1911
 Kersters, K. 92, 1911, 2848
 Kertesz, M. A. 3641
 Keskitalo, P. J. 1029
 Kessler, A. O. 3041
 Kessler, H. G. 1088
 Kétyi, I. 3021-3022
 Keusch, A. 944
 Kfir, R. 2833, 2892, 3071, 3189, 3191, 3904
 Khalafawi, M. S. 2068
 Khalid, A. M. 816
 Khalid Rashid 176
 Khallayoun, K. 416
 Khambaty, F. M. 3031
 Khan, E. 721
 Khan, M. F. 1971
 Khan, M. I. 725, 3647
 Khan, M. M. H. 2086
 Khan, S. M. 2497
 Khanafer, M. 2502
 Khandan, N. N. 2235
 Khanna, P. 1159, 2764
 Khanna, S. 3803
 Kharchevnikova, N. V. 2464
 Khire, J. M. 725, 3647
 Kholodenko, V. P. 1022
 Khoo, L. E. 3041
 Khu, P. T. 1158
 Kiatsompob, T. 2939
 Kida, K. 463, 468, 695, 1226, 2642
 Kiehlmann, E. 3567
 Kierek-Jaszczuk, D. 1888
 Kihara, Y. 2321
 Kikuchi, K. 795
 Kikuchi, R. 3625
 Kilgour, B. W. 223
 Kilian, S. G. 2754
 Killick, E. G. 3044
 Kim, B. J. 1661
 Kim, B. R. 1756
 Kim, C. R. 945, 2015
 Kim, C. W. 392
 Kim, D. S. 806, 1197, 1769
 Kim, D. W. 3539
 Kim, H. S. 2504-2505
 Kim, J. W. 136, 994, 1005
 Kim, K. T. 140
 Kim, K. Y. 1021, 2111
 Kim, L. W. 155
 Kim, M. 1924
 Kim, M. H. 1265, 1611
 Kim, M. K. 3413
 Kim, S. J. 3137, 3781
 Kim, S. W. 3532
 Kim, Y. G. 3874
 Kim, Y. J. 3429
 Kimber, R. W. L. 3217
 Kimbrough, J. 2944
 Kimchie, S. 3765
 Kimura, B. 114
 Kimura, H. 757
 Kimura, N. 1017
 Kimura, T. 3280
 Kimura, Y. 2762

- Kinderlerer, J. L. 2558, 2873, 2941
 Kindzierski, W. B. 2702
 King, G. M. 3868
 King, T. P. 2162
 King, V. A. E. 3051
 King, V. M. 2154
 Kingamkono, R. 2946
 Kinneman, K. C. 1846
 Kinney, K. 386
 Kinney, M. P. 1539
 Kinoshita, C. M. 721
 Kinoshita, S. 1297
 Kirchman, D. L. 2252
 Kirigaya, C. 2030
 Kirikae, T. 892
 Kirimura, K. 467
 Kirk, R. 821
 Kirov, S. M. 2917
 Kirton, H. C. 2832
 Kishan Singh 2486
 Kishi, J. 1835
 Kishimoto, K. 3837
 Kishore, N. 1978
 Kitamoto, D. 2459
 Kitamoto, H. K. 2459
 Kitamura, K. 3794
 Kitanidis, P. K. 2506
 Kitano, M. 3451
 Kittel, J. 3240
 Kittle, J. D. 3858
 Kitunen, V. 2542
 Kitunen, V. H. 2543
 Kivaisi, A. K. 2471
 Kiwi, J. 3583
 Kiyohara, T. 2563
 Kiyono, M. 795
 Kjølstad Poulsen, N. 672
 Kladenhammer, T. R. 2152
 Klapeč, T. 2238
 Klapes, N. A. 1002, 2152, 3062
 Klapwijk, A. 408-409, 2329, 3303
 Klapwijk, P. 2090
 Klasson, K. T. 1400
 Klecka, G. M. 501
 Kleiber, B. 1267, 1276
 Klein, J. 2564
 Klein, T. W. 260
 Kleiss, T. 2851
 Kletzin, A. 1814
 Kliff, D. W. van der 3019
 Klingeren, B. van 1057
 Klippel, K. M. 3053
 Klöft, L. 3314
 Klostermann, P. 2161
 Kluepfel, D. 802
 Klute, R. 2797
 Knabel, S. J. 1001, 1096, 1890, 2075-2076, 2831, 2987
 Knackmuss, H. J. 654
 Knapp, J. S. 3772, 3780
 Knapp, R. B. 3223
 Knaf, H. J. 1899
 Kneifel, W. 1987
 Knezevic, Z. 3351
 Knezovich, J. P. 3223
 Knight, G. C. 3693, 3830
 Knight, I. T. 3360, 3363
 Knight, R. L. 1332
 Knill, C. J. 3249
 Knöchel, S. 1079
 Knoifel, H. 775
 Knörle, U. 1231
 Knowles, C. J. 2410
 Knowles, R. 679, 3728
 Knudsen, L. 1726
 Knudtson, L. M. 1112
 Kobayashi, H. 3601
 Kobayashi, T. 772
 Kobrin, G. 2803
 Kocabiyyik, S. 3839
 Kocasoy, G. 769
 Koch, M. 635
 Koch, W. H. 2967
 Kochev, K. 1578
 Kocianova, E. 1114
 Kocwa-Haluch, R. 3581
 Kodama, T. 457, 1447, 3501
 Kodukula, P. S. 3405
 Koedood, J. 3105
 Koenraad, P. M. F. J. 292
 Kofronová, O. 1013
 Koga, Y. 2353
 Koh, S. C. 3487
 Kohler, H. P. E. 2428
 Köhler, S. 12
 Kohler-Staub, D. 3433
 Kohno, S. 3862
 Kohring, G. W. 581
 Koike, Y. 1919
 Kók, E. 723
 Kokufuta, E. 564, 3444
 Kolb, F. R. 2446
 Kölbener, P. 1740, 3641, 3644-3645
 Kolch, A. 208
 Kolomiets, É. I. 571
 Kolomiets, I. A. 3806
 Komárek, J. 2683
 Komatsu, T. 2431
 Komisar, S. J. 604
 Kon-ya, K. 2176
 Kondo, M. 2760
 Kondo, R. 1698, 2656-2658
 Kone, K. M. 1982
 Kong, S. 1579, 3089, 3318
 Kong, Z. 1146
 Konings, W. de 2462
 Konings, W. N. 520
 Konishi, H. 2165
 Konkle, A. 917, 1891
 Konopka, A. 783, 1556
 Kool, B. W. 1307
 Kooij, D. van der 3019
 Kooloobandi, A. 1685
 Koons, C. W. 2990
 Koopman, B. 392
 Koowatananukul, C. 152
 Kopecka, H. 2843, 2879
 Koponen, R. 1713
 Köppe, G. 22
 Koppetsch, J. 1275
 Korikoshi, K. 3601
 Korkurt, E. N. 1717
 Koro, P. M. 1527, 2555
 Kortekaas, S. 1714, 1719
 Korus, R. A. 616, 2547, 3476
 Korzhenevich, V. I. 2440
 Kościelniak, H. 3325
 Kosić, M. 131
 Koskinen, W. C. 624
 Kostenbader, K. D. 2693-2694
 Kostenberg, D. 3756
 Koster, T. 33
 Kostov, O. 2295
 Kotak, B. G. 3151
 Kotelnikova, S. V. 3179
 Kotsyurbenko, O. R. 2744
 Kott, Y. 298
 Kotterman, M. J. J. 1471
 Kotula, K. L. 964
 Kouassi, Y. 1954
 Kovács, A. 2623
 Kovalainen, J. 3302
 Kowalewska-Piontas, J. 2681
 Kowata, T. 613
 Kozakiewicz, Z. 2215
 Kozub, G. C. 2045
 Kozyreva, L. P. 1561, 3618
 Králik, M. 1635
 Králik, M. 2623
 Kralova, B. 3833
 Krasovsky, G. N. 2464
 Krastanov, A. I. 2381
 Kratochvil, K. 1678
 Krause, A. 2847
 Krause, I. B. 1103
 Kravetz, L. 2579, 3643
 Kremer, S. 2517
 Kreps, S. 2427, 3502
 Krieg, N. R. 2185
 Krishan Singh 1463
 Krishna Menon 2757
 Krishna Nand 487
 Krishnamohan 1526
 Krishnamurthy, S. 3218
 Krishnan, C. 2051
 Krishnan, M. R. V. 2667
 Krishnan, S. 3580
 Kristensen, G. H. 1309, 1613
 Kristiansen, N. 139
 Kristjáansson, J. K. 1080
 Kristjánsson, J. K. 3873
 Kristoffersen, O. 1708
 Kriston, É. 3230
 Krivosov, A. A. 750
 Krizek, L. 208
 Krogh, M. H. 1364
 Krohn, G. 878
 Kroiss, H. 332
 Kroll, R. G. 854, 1935, 2201
 Kronqvist, K. 3422
 Kropp, K. G. 1496
 Kršev, L. 161
 Krueger, S. 3658
 Krugel, S. 1211
 Kruij, J. 1315
 Kruize, R. R. 3910
 Krull, R. 3427
 Krumbein, W. E. 2112, 2120
 Krumme, M. L. 1162
 Krupčík, J. 2414, 2466
 Kruzic, A. P. 1169
 Ksheminskaya, G. P. 3380
 Kuang, Q. J. 1838
 Kuba, T. 3749
 Kubatova, E. 3525
 Kubo, K. 448
 Kubota, H. 2398
 Kuchenrither, R. D. 452
 Kuchta, J. M. 3035
 Kucman, K. 3718
 Kudo, K. 1232
 Kudoh, Y. 2198
 Kueh, C. S. W. 3138, 3150
 Kuenen, J. G. 1796, 2732
 Kuffa, R. 1580
 Kuhad, R. C. 534, 818, 1198, 1593, 2477, 2664, 3515
 Kuhlmeier, P. D. 506
 Kuhn, M. 12
 Kuhn, W. 1274
 Kühni, M. 3712
 Kuij, R. J. van der 1776
 Kuila, R. K. 2705
 Kulakova, A. N. 3564
 Kulandaivelu, G. 1407
 Kulis, D. M. 2222
 Kulkarni, C. Y. 923
 Kulle, E. P. 1192
 Kulpa, C. F. 527, 567, 1500
 Kulshrestha, S. B. 942, 2962
 Kumagai, H. 2762
 Kumar, G. 3456
 Kumar, M. 3515
 Kumar, N. J. 2764
 Kumar, P. B. A. N. 3220, 3228, 3668
 Kumar, S. 713, 1917
 Kumar, V. 2094
 Kume, T. 2476
 Kumeda, Y. 2925
 Kummel, M. 682
 Kummel, M. 2257
 Kummer, K. D. 388
 Kunhi, A. A. M. 2396
 Kunst, S. 1322
 Kunz, B. 513, 1434
 Kunze, C. 1520
 Kunzler, C. 3299
 Künzler, W. 129
 Kuo, Y. M. 283
 Kurakake, M. 2483
 Kurane, R. 3847
 Kurihara, K. 1098
 Kurihara, T. 3840
 Kurita, O. 772
 Kuroda, K. 3808
 Kuroda, M. 676, 3738
 Kurucz, C. 733
 Kus, F. 3440
 Kushwaha, R. L. 1399
 Kusnetsov, J. M. 210, 1029
 Kusters, J. G. 254
 Kustritz, J. M. 2426
 Kusuda, T. 1225, 1394
 Kut, O. M. 1733-1734, 3458
 Kuttab, A. S. 2389
 Kuwatsuka, S. 628
 Kwong, T. S. 349
 Kwong T. S. 3603
 Kyriakidis, D. A. 2378
 Kyu, K. L. 608
 La Farge, B. de 2801
 La Rosa, G. 3891
 Laan, T. van der 292
 Labare, M. P. 1438, 2562
 Labbé, D. 2708, 3549
 Lacamp, B. 3699
 Lacasse, P. 1891
 Ladiges, G. 671
 Laffey, C. D. 1837
 Lafrance, P. 661
 Lagarrigue, J. 2369-2370
 Laguros, J. G. 2366
 Lahai, G. P. 124
 Lahellec, C. 850
 Lahlou, H. 97
 Lahti, K. 2893, 2923, 3134
 Lai, H. C. 3041
 Lai, M. S. 2575
 Lajoie, C. A. 3236, 3577
 Laken, T. J. 1291
 Lakritz, L. 1875, 3059
 Laks, P. E. 189
 Lakshmanan, M. 1834
 Lakshmanaperumalsamy, P. 1125, 3056
 Lalitha, K. 3390
 Laillement, C. 3312
 Lalucat, J. 3555
 Lam, A. K. Y. 3151
 Lam, W. L. 2360
 Lamar, R. T. 2534, 2572, 3467
 Lamas, B. P. 2123
 Lambert, M. 3222
 Lambertet, G. 3855
 Lambiri, M. 8, 26
 Lamed, R. 1789
 Lamontagne, G. 1891
 Lamouche, A. 1276
 Lanaras, T. 888
 Lance, J. C. 451
 Lancette, G. A. 120
 Lanciotti, R. 266, 2886
 Land, G. 1266
 Landon, M. 3855
 Landone, A. 2580
 Landry, M. F. 3257
 Lane, J. 2880
 Lang, E. 3568
 Lang, S. 1792
 Langbehn, A. 1509
 Langdon, A. G. 1700
 Lange, C. 591
 Lange, C. C. 781
 Lange, C. R. 1810
 Langenhove, H. van 2516
 Langerak, A. van 1566
 Langlade, V. 3614
 Langlais, B. 3268
 Langley, M. N. 2775
 Lankford, P. W. 329
 Lanthier, P. 3520
 Lapidot, A. 3844
 Lappe, P. 3129
 Lappin-Scott, H. M. 3615
 Lapsins, E. V. 1433
 Lapsirikul, W. 737-738
 Lapygina, E. V. 569
 Larkin, M. J. 290, 518
 Laroque, R. 2959
 Larosche, M. E. 1459, 2244
 Larose, A. 790
 Larrea, L. 1324
 Larroche, C. 2423
 Larsen, E. H. 1760
 Larsen, L. M. 953
 Larsen, T. A. 1395
 Larson, R. J. 1568
 Larsson, L. 2919, 3111, 3799
 Larsson, M. 147
 Larue, F. 1992
 Lashbrook, L. C. 2956
 Lassen, C. 3181
 Lasta, J. A. 970, 2042
 Latif, F. 2491, 2494
 Lattuada, C. P. 871
 Latus, M. 1516
 Lau, P. C. K. 2708, 3549
 Launen, L. 3567
 Laurinavichyus, K. S. 3179, 3477

- Laursen, K. D. 1620
 Lautier, J. 2369-2370
 Lauvvik, T. 1178
 Lavador, F. 422
 Lavallee, H. C. 2653-2654
 Lavallée, P. 1696
 Lavin, A. G. 1665
 Law, R. 2961
 Lawford, H. G. 476
 Lawrence, J. F. 2955
 Lawrence, J. R. 623
 Lawrence, L. M. 158, 2882
 Lawson, P. 139
 Laycock, M. V. 2027
 Layton, A. C. 3577
 Lazarova, V. 677, 1212, 1217, 3254
 Le, U. 2741
 Le Bars, J. 2930
 Le Bars, P. 2930
 Le Cloirec, P. 1664
 Le Grand, L. 1657
 Le Jean, G. 877
 Le Jeune, C. 2781
 Leadbetter, E. R. 651
 Leake, R. A. 3907
 Leathers, T. D. 2382
 Leavitt, M. E. 3800
 Lebeault, J. M. 577, 1406, 3492
 Lebel, A. 727
 Lebrato, J. 1233, 1379
 Lechner, U. 2542
 Lechowich, R. V. 31
 Leclair, K. 999
 Leclerc, H. 24, 861, 1912
 Ledoux, M. 1878
 Leduc, L. G. 2734
 Leduc, R. 442
 LeDuy, A. 1557
 Lee, C. 457, 3646
 Lee, C. M. 674
 Lee, C. Y. 1998
 Lee, D. H. 3137
 Lee, E. 2518
 Lee, E. J. 3137
 Lee, E. Y. 1443
 Lee, G. J. 2619
 Lee, G. M. 1824
 Lee, H. 2296, 3410
 Lee, H. A. 2775
 Lee, J. 1997
 Lee, J. K. 3539
 Lee, J. S. 192, 3532
 Lee, J. V. 3034
 Lee, J. Y. 2504-2505
 Lee, M. D. 3239
 Lee, N. A. 497
 Lee, N. M. 1654
 Lee, P. L. 1219
 Lee, R. F. 3652
 Lee, R. J. 27
 Lee, R. M. 1043-1045
 Lee, S. 2259, 2264
 Lee, S. A. 387, 1485
 Lee, S. H. 1698, 2656, 2658, 3137, 3870
 Lee, S. L. 3409
 Lee, S. O. 3870
 Lee, S. T. 1824
 Lee, T. H. 3870
 Leege, P. 369
 Leenen, E. J. T. M. 3725, 3832
 Leer, R. J. 1061
 Leeson, A. 3240
 Leeuw, E. J. 3701
 Leeuw, J. W. D. 2121
 Lefebvre, G. 56, 261, 2172-2173
 Lefèvre, F. 617
 LeGall, J. 515
 Legan, J. D. 1980
 Legge, R. L. 1510
 Legrand, R. 3399
 Leguerinel, I. 1993
 Lehmann, F. 2439
 Lehmann, P. 1255
 Lehri, P. 713
 Leimeister-Wächter, M. 12
 Leisinger, T. 1740, 3433, 3644-3645
 Leisner, J. J. 953
 Leitão, M. F. de F. 2064
 Leja, L. L. 940
 Lekhlif, B. 1273
 Lelie, D. van der 3827
 Lema, J. M. 489, 549, 1673, 2317, 2319, 2347, 2541, 3275
 Lemmel, H. 1260, 2313
 Lemmer, H. 1155, 1303, 1822, 2254
 Lemus, R. 1767
 Lena, G. D. 464
 Lennox, S. D. 1129
 Lens, P. 669, 1214, 2638, 2742
 Lens, P. N. 1196
 León, J. 188
 Leon, S. P. de 115
 Leoni, B. 568
 Leonov, V. O. 750
 Leonowicz, A. 2748
 Lépine, F. 2538
 Lepistö, S. S. 2344
 Leppänen, V. M. 3683
 Lerman, S. 3032
 Lesage, S. 3208
 Lesanský, M. 1678
 Lesavre, J. 2312
 Leschine, S. B. 2490
 Lesouef, A. 1304
 Lessard, P. 1327
 Lessard, S. 3802
 Lessel, T. H. 1626
 Leštan, D. 634
 Leštan, D. 3898
 Lesty, Y. 1301
 Letebele, B. 1586
 Letellier, L. 3082
 Létourneau, L. 2538
 Lettinga, G. 348, 426, 662, 1229, 1600, 1714, 1719, 2349, 2603, 2798, 3488, 3689
 Leung, K. 800
 Leung, Y. L. W. 2360
 Leuschner, R. G. K. 244
 Lev, O. 3032
 Levanon, D. 611, 3624
 Lévesque, B. 3227
 Levett, P. N. 290
 Levin, R. E. 936
 Levinson, H. S. 2451
 Levinson, W. E. 616
 Lewandowski, G. 597, 2556, 3584
 Lewandowski, G. A. 2624
 Lewandowski, Z. 1174
 Lewis, D. H. 946
 Lewis, T. A. 2450
 Lewus, C. 2208
 Ley, A. 1913
 Leyris, J. P. 1177
 Leyval, C. 2443
 Lezinou, V. 3612
 Lhadi, E. K. 714
 L'Haridon, S. 3851
 Li, C. S. 283
 Li, D. 3883
 Li, D. S. 3377
 Li, F. 1149
 Li, S. 345
 Li, S. L. 539
 Li, S. W. 3612
 Li, S. W. Y. 2302
 Li, T. C. 532
 Li, X. F. 1492
 Li, X. L. 3871
 Li, X. Y. 539
 Li, X. Z. 2680
 Li, Y. B. 155
 Li, Y. Y. 1228, 2401, 2559
 Li, Z. Y. 3486
 Li ZuYi 3486
 Liang, L. N. 1512
 Liang, R. 3593
 Liang, Y. X. 174
 Liao, P. H. 372, 1763, 1765, 2309
 Liaw, C. M. 1210
 Libao, L. L. 1907
 Liberti, L. 295
 Limond, S. 550, 1243
 Liddell, J. M. 1411
 Lie, E. 3733
 Liebeskind, M. 406, 1154, 1616
 Lienard, A. 2312
 Lier, J. B. van 3488
 Lier, J. J. C. van 1242
 Liessens, J. 683, 2848
 Lievense, L. C. 1809
 Lightfoot, N. F. 20
 Lightner, D. V. 938
 Ligler, F. S. 53
 Ligugnana, R. 1894
 Lillard, H. S. 989, 1007, 2078
 Lilly, M. D. 1411
 Lim, B. S. 336, 1611
 Lim, J. H. 1769
 Lim, W. J. 459
 Lim, Y. S. 2212
 Lima, A. W. O. 2039-2040
 Limbert, E. S. B. 2394, 2531
 Limia, J. M. 3402
 Limond, A. 159
 Limoni, N. 1389
 Lin, C. F. 1265
 Lin, C. K. 3, 2193
 Lin, I. T. 1898
 Lin, J. C. 2621
 Lin, L. W. 138, 973
 Lin, M. R. 1227, 2357
 Lin, S. C. 1551
 Lin, S. H. 601, 1305
 Lin, W. F. 3099
 Lin, Y. F. 1168, 3710
 Lin ChuZhao 3038
 Linardi, V. R. 2631
 Lind, J. E. 1777
 Lindahl, V. 2707
 Lindberg, C. F. 297
 Lindemann, W. C. 3655
 Lindgren, S. 2374
 Lindišová, G. 2466
 Lindley, N. D. 2731
 Lindqvist, R. 1118
 Lindrea, K. C. 394, 1306, 3693
 Lindsay, J. A. 249
 Lindsay, S. E. 2567
 Lindsey, S. B. 1367
 Lindström, A. 1702
 Line, J. E. 66, 1964
 Line, M. A. 371
 Ling, W. 3573
 Lingén, F. 2582
 Lingens, F. 560, 1516, 2452
 Liniger, M. 129
 Linke, B. 1758
 Linz, J. E. 1962
 Lion, L. W. 645, 3677
 Lior, H. 246
 Liou, J. W. 3
 Lishman, L. A. 787
 Lisk, D. J. 620
 Lisker, N. 86
 Lissens, G. 1649
 Liston, J. 60, 2918
 Literathy, P. 3232
 Lith, L. A. J. T. van 259
 Little, R. H. 364
 Liu, B. Y. 3272
 Liu, C. H. 3038
 Liu, C. J. 16
 Liu, J. Q. 3840
 Liu, P. K. T. 578
 Liu, S. 1432, 2605
 Liu, S. M. 505, 1457, 2650
 Liu, W. H. 3406
 Liu, Y. 1624-1625, 1632, 1655
 Liu, Z. 3036
 Liu, Z. T. 1451
 Livingston, A. G. 337, 1435, 3355, 3411, 3416, 3428
 Lizama, H. M. 650, 2651
 Ljungdahl, L. G. 3871
 Ljungh, Å. 2183
 Llabrés-Luengo, P. 3352
 Llovera, S. 3671
 Lloyd, D. 1893
 Lloyd-Jones, G. 2717
 Lo, C. K. 673
 Lo, H. H. 2320
 Lo, K. V. 372, 1763, 1765, 2309, 2343
 Lo, S. N. 2653-2654
 Lobe, D. C. 3069
 Lobsinger, C. M. 994
 Locher, H. H. 520
 Lock, J. L. 914, 1989
 Lock, M. A. 1152
 Locke, S. J. 893
 Lockwood, G. A. 1306
 Loessner, M. J. 47, 1103
 Loewenthal, R. E. 680, 1312
 Logan, B. E. 1203, 2252, 3115, 3575
 Logan, G. 3138
 Logsdon, G. 3284
 Loh, C. L. 3148
 Loidl, M. 784
 Lombardi, P. 1074
 Londong, J. 339, 1292
 Loneragan, G. 3877
 Longeaux, N. de 1183
 Lönnner, C. 91
 Lonvaud-Funel, A. 1992, 2781
 Looney, R. 232
 Loos, D. 1385
 Loosdrecht, M. C. M. van 686, 1631, 2272, 2279, 2281, 3326, 3749, 3752
 Loper, J. C. 3213
 Loperena, L. 1410
 López, F. 731
 López, M. 2827
 Lopez, M. 2194
 López, M. C. 2088
 López-Amorós, R. 1893
 López-Díaz, T. M. 250
 López-Malo, A. 3055
 López Menéndez, H. 711
 López-Pila, J. M. 2843, 2879, 3165
 Lopez-Real, J. M. 1256
 López-Sabater, E. I. 117, 119, 941
 Lopez-Sabater, E. I. 2020
 Loppnow, H. 892
 Loquet, M. 378
 Lorbeer, J. W. 1081
 Lorca, V. 25
 Lorenzo, J. 2116
 Lorenzo, V. de 773, 3439
 Losi, M. E. 648
 Lotter, L. H. 2635
 Loureiro-Dias, M. C. 1121
 Louvois, J. de 2839
 Louzao, M. C. 943
 Lovell, C. R. 3594
 Lovley, D. R. 3221
 Low, J. C. 1972
 Lowcock, D. 251
 Lowe, A. 2422
 Löwe, R. 73
 Löwenadler, J. 1925
 Lowman, H. R. 911, 1006
 Lozano, P. 609
 Lu, C. 1748
 Lu, C. S. 2357
 Lu, C. Y. 674
 Lu, P. 1888
 Lu, W. M. 674
 Lübbecke, S. 1195
 Lucena, F. 28
 Luchansky, J. B. 3112, 3114, 3119
 Lucht, L. 3060
 Lucia, L. M. 2044
 Lüdemann, H. D. 1465
 Ludwig, B. 13
 Ludwig, W. 253, 1812, 2508, 2847
 Lueking, D. R. 3461
 Luftig, R. B. 2177
 Luk'yanenko, V. I. 3141
 Lun, S. Y. 2348
 Lund, B. M. 2209, 2877, 2907, 3120
 Lund, F. 1936, 3127
 Lund, V. 226, 1052
 Lundie, L. L., Jr. 3673
 Lundin, M. 1699
 Lundquist, T. J. 3694
 Lundstedt, B. 3339
 Luque, M. 482, 703, 707
 Lüthy, J. 884
 Luthy, R. 3800

- Luthy, R. G. 2676
 Lutz, M. P. 1262
 Lutz, W. 764
 Luu, H. A. 3095
 Lyberatos, G. 1750, 3349
 Lyford, K. A. 1470
 Lymer, E. 2759
 Lynch, J. 319
 Lynch, J. M. 825
 Lynch, M. 440
 Lynd, L. R. 1470
 Lynggaard-Jensen, A. 761, 1201
 Lysak, L. V. 569
 Lysenko, A. M. 2744
 Lytle, C. D. 3092
 Lytle, M. S. 3907
 Ma, C. Y. 11
 Ma, H. L. 16
 Ma, J. F. 2888
 Ma, K. 2614, 3679
 Ma, T. 1190, 2271
 Maarel, M. van der 2428
 Maas, R. N. 3853
 McAree, T. 3385
 Macarie, H. 3257
 Macario, A. J. L. 3859, 3861
 Macario, E. C. de 3859, 3861
 McAtamney, C. 1843
 Macauley, B. J. 350, 1246
 McBeth, D. L. 3833
 McCabe, R. W. 1019
 McCarthy, J. L. 3414
 McCarthy, S. A. 3031
 McCarty, P. L. 2449, 2526, 3207, 3457
 McCarty, S. L. 1361
 McCauley, I. 29
 McClelland, M. 241
 McClelland, R. G. 1859
 McClung, G. 3628
 McClure, N. C. 2777
 McClure, P. J. 1883
 McComb, A. J. 1339
 McConnell, H. 1211
 McCordick, H. J. 3690
 McCormack, W. P. 565
 McCrae, S. I. 1460
 McCready, T. L. 3095
 McCroskey, L. 2947
 McCurdy, A. R. 965
 McDonald, S. 878
 MacDonald, A. 15
 MacDonald, F. 164
 McDonnell, S. 3830
 McDowell, D. A. 137, 957-958, 995, 2981-2982
 McDowell, S. G. 301 i
 McDowell, T. 2159
 Macek, M. 1819
 McElroy, L. J. 1966
 McFarland, M. J. 3591, 3593
 McFarlane, M. J. 3796
 McFarlane, P. N. 1700, 1704
 McFeters, G. A. 263, 2131, 3066, 3192
 McGahey, C. 2867
 MacGarvin, M. 3361
 McGhee, I. 3631
 McGill, W. B. 1480
 MacGillivray, A. R. 2510
 McGinnis, D. S. 2052
 McGrath, S. P. 3672
 Macgregor, A. N. 1770
 McGuigan, J. T. M. 158
 McGuire, J. 3107
 Machado, R. A. 2064
 McHale, A. P. 1466, 1570, 2593, 3385, 3523, 3530
 McHale, L. 1466, 2593, 3385, 3523, 3530
 McHale, S. 1570
 Machida, M. 1697
 Machurová, V. 1013
 McInerney, J. O. 3121
 McInnes, K. J. 3233
 McIntyre, S. 1997
 McKay, A. M. 710, 1414, 2889
 McKay, D. 2436
 McKay, D. J. 3474
 McKay, T. 1927
 McKee, C. 2947
 McKee, L. H. 1985
 McKellar, R. C. 11, 146, 999, 2916
 Mackenzie, J. 878, 1891
 MacKenzie, L. 1927
 McKeown, T. 1562
 Mackerness, C. W. 1916
 Mackey, B. M. 43, 245, 849, 2146, 3098, 3116
 Mackie, G. L. 223, 688
 Mackie, K. L. 1700
 Mackie, R. I. 2684
 MacKinnon, M. D. 1488
 Mackle, H. 2905
 McLaughlin, J. 2028
 McLaughlin, J. C. 3061
 McLaughlin, L. A. 1170
 McLean, J. A. 187
 McLean, R. J. C. 1158, 2129
 MacLeod, A. 182
 McMaster, M. L. 1775
 McMillin, K. W. 963, 971
 McMullan, G. 629, 3713
 McMullen, L. M. 141
 McNab, W. B. 911, 1006
 McNamara, A. M. 2818
 McNamee, C. G. 500, 664
 MacPhee, S. 2043
 Macris, B. J. 3612
 Macy, J. M. 3697
 Madamwar, D. 439, 1390
 Madarro, A. 2704, 2728
 Madden, J. M. 844, 2816
 Madden, R. H. 1004
 Madden, U. A. 68
 Maddonni, M. F. 2195
 Mäder, C. 1615
 Madgwick, J. C. 3666
 Madhavi, D. R. 1553
 Madhu, G. 2669
 Madhyastha, M. S. 894
 Madie, P. 2062
 Madigan, M. T. 782
 Madole, C. 3289
 Madoni, P. 301, 1840-1841
 Madsen, H. 672
 Madsen, M. 1815
 Madura, R. L. 3661
 Maekawa, T. 3280
 Maestrojuan, G. M. 1380
 Mafart, P. 2191
 Mag, V. 1342
 Magalhães, F. C. 199-200
 Magara, Y. 443
 Magbanua, B. S., Jr. 3586
 Magdalenic, B. 160
 Magdalinuk, S. 2443
 Maggio, T. di 3128
 Magnusson, P. 2618
 Magot, M. 660, 3454
 Magri, M. 1084
 Mah, R. A. 566, 3396
 Mah, T. J. 2619
 Mahadeo, M. 233
 Mahadevan, A. 631
 Mahajan, M. C. 2448
 Mahali, S. A. 952
 Mahapatra, C. M. 2066
 Mahadevan, A. 3783
 Mahimairaja, S. 755, 1770
 Mahmoud, A. L. E. 65, 554
 Mahnke, J. 2537
 Mahon, J. 151
 Mahro, B. 1491
 Maier, R. S. 3623
 Maifreni, M. 2829, 2906
 Majjala, R. 1086
 Mainil, J. 2184
 Mainwaring, D. 3877
 Majidi, V. 603
 Majone, M. 1318
 Major, J. 1870
 Majumdar, P. 3231
 Maka, A. 1552
 Makagawa, M. 463
 Mäkelä, P. 2059
 Maki, H. 3640
 Mäkinen, P. M. 1699
 Makino, M. 3058
 Makkar, H. P. S. 1430
 Malarczyk, E. 2748
 Malard, F. 1167
 Malburg, L. M., Jr. 3534
 Maldonado, G. del R. Andrade-2375
 Malek, M. A. 2476
 Maleville, A. 2369-2370
 Malherbe, B. 3211
 Malik, K. A. 2491, 2494
 Malik, R. K. 1420, 2082, 2488
 Malin, V. 3142
 Malle, P. 2023
 Mallick, N. 1605
 Mallinson, E. T. 1940
 Mallo, R. A. 970
 Malloggi, L. 1085, 2031, 2908
 Malmqvist, Å. 1715, 1787
 Malmstead, M. J. 2442
 Mamat, U. 892
 Mamta Lal 2671
 Manafi, M. 49, 3905
 Manandhar, U. K. 1644
 Manchester, L. N. 2205
 Mancilha, I. M. de 2474
 Mandal, A. 1577, 2594
 Mandelco, L. 1811
 Mandhulika 2488
 Mandi, L. 1362
 Mandl, M. 2608, 2613
 Manem, J. 344, 1212, 1217, 3254, 3312, 3321
 Maniow, V. 2790
 Manish Kumar 3515
 Manisha Gupta 2595
 Manjón, A. 609
 Mannheim, C. H. 922
 Manning, F. S. 3430
 Manning, J. 523, 1500
 Manning, J. F., Jr. 527
 Mannivannan, T. 2673
 Manor, Y. 227
 Mansfield, L. P. 2096
 Mansour, M. 1454
 Mansour, M. A. 706
 Mansour Samadpour 60
 Mantelli, G. N. 2322
 Manu-Tawiah, W. 2049
 Manz, W. 400, 1155
 Manzanares, P. 1701
 Manzano, M. 2829, 2906
 Manzen, S. 1413
 Manzyuk, N. N. 1022
 Maqueda, C. 1233, 1379
 Mara, D. D. 414, 2237
 Maragos, C. M. 175
 Marais, G. V. R. 1312, 1323
 Marakis, S. 1402
 Marcel, J. 2686
 Marchaim, U. 3756
 Marchant, R. 1466, 3530
 Marchetti, L. 592, 595, 2433
 Marchetti, R. 2791, 3313
 Marchevsky, N. 970
 Marchi, A. 109, 2006
 Marchiani, M. 792
 Marchot, P. 1273
 Maréchal, J. 2879, 3903
 Margalith, P. 922
 Margolin, A. B. 2868-2869, 2903
 Marimuthu, T. 2468
 Marin, B. 1406
 Marín, M. L. 869, 2210
 Marino, A. M. 2912
 Marino, R. di 295
 Mariojous, C. 2686
 Marion, P. 3793
 Marison, I. W. 481
 Maritato, M. 2308
 Maritainen, P. J. 1749
 Markham, D. A. 501
 Märkl, H. 1223
 Marks, R. E. 3244
 Marmer, B. S. 134, 998
 Marquardt, R. R. 894, 1888
 Marques, L. R. M. 1955
 Marr, J. B. 1757
 Marraffa, V. 592
 Marriott, N. G. 2971
 Marsalek, J. 1126, 1136
 Marshall, D. L. 963, 971, 1035, 2015, 2026, 2163
 Marshall, K. C. 3823
 Marshall, R. 919
 Marsot, P. 665
 Marteinsson, V. T. 1080
 Martel, C. J. 291
 Martens, D. A. 3550
 Marth, E. H. 2091, 3046
 Martikainen, P. J. 210, 1027, 1029
 Martín, A. 482, 551, 700, 703, 707, 1382
 Martin, A. 1668, 1938
 Martin, B. 2256
 Martin, C. 1701
 Martin, C. D. 1360
 Martin, G. 2636
 Martin, H. W. 262
 Martin, I. D. 325
 Martin, K. W. 1886
 Martín, R. 872
 Martin, S. A. 1897
 Martin, S. E. 1083, 1099
 Martínez, A. 925
 Martínez, A. T. 582, 1469, 2113, 2769
 Martínez, C. 609, 731
 Martínez, J. 1671, 3774
 Martínez, M. J. 582, 1469, 2113, 2769
 Martínez-Manzanares, E. 3139
 Martínez P., M. 1761
 Martínez-Toledo, M. V. 2380
 Martins, A. J., Jr. 734
 Martins, M. T. 25, 1119, 2024, 2856, 3030
 Martinussen, T. 2643
 Mörtlbauer, E. 123, 2926
 Martzotto, G. 2031
 Marucic, M. T. 25
 Marugg, C. 353, 2298
 Maruyama, T. 3545
 Marzullo, L. 542
 Masana, M. O. 980, 2042
 Masaphy, S. 3624
 Masciandaro, G. 493, 751
 Mashhadi, A. S. 150
 Masliyah, J. H. 323, 3459
 Maslyukov, A. P. 224
 Mason, C. A. 341
 Mason, D. J. 1893
 Mason, J. C. 2749
 Mason, R. P. 3663
 Massa, P. C. 2000
 Massa, S. 2001
 Masscheleyn, P. 1568, 3649
 Massey, I. J. 1535, 2545
 Massone, A. 1214
 Mast, M. G. 2075-2076
 Masters, C. I. 43
 Masuda, M. 2424
 Masuda, N. 3640
 Masuda, S. 2358
 Masunaga, S. 613
 Masuyama, A. 3642
 Mata-Alvarez, J. 2692, 3352
 Matasci, R. N. 382
 Mathee, A. 2833
 Mathis, R. 56
 Mathrani, I. M. 2724
 Mathur, D. K. 2082
 Mathur, N. 1915
 Mathur, S. N. 1464, 2496
 Mathur, S. N. 1412
 Matilainen, T. 3857
 Matis, K. A. 647
 Mato, S. 3296
 Matrubutham, U. 3429
 Matsché, N. 1320
 Matsudomi, N. 517
 Matsufuru, H. 525
 Matsuhashi, S. 2476
 Matsui, K. 1393
 Matsui, T. 504, 2030
 Matsui, Y. 1326
 Matsukura, H. 746
 Matsumoto, H. 3886
 Matsumoto, J. 695
 Matsumoto, T. 746
 Matsumura, S. 2563
 Matsuo, M. 3625

- Matsuo, T. 385, 1269, 1302, 2431, 3737
Matsuo, Y. 3754
Matsuoka, M. 1786
Matsushima, K. I. 2859
Matsushita, S. 2198
Matsuura, K. 2225
Matsuura, T. 746
Matsuzawa, Y. 762
Matté, G. R. 2024
Matté, M. H. 2024
Matte, N. 322
Matthews, M. E. 3046
Matthies, K. 357
Matthijs, E. 3649
Mattia, E. D. 464
Mattila-Sandhom 1023
Mattsson, E. 1725
Mattuschka, B. 1585
Matucha, M. 602
Matyushin, G. A. 224
Maue, G. 813
Mauguin, S. 954
Maul, A. 2273, 2557
Maurer, E. M. 946
Maurer, M. 3751
Mauet, M. 1650
Mauriello, G. 988, 3084
Maurya, M. S. 2241
Mavinic, D. S. 1378, 2343, 3351
Mavridou, A. 8, 26
Mawadza, C. 1674
May, E. 1333, 3013
May, G. 3282
May, H. D. 3505
May, J. W. 690
May, P. 3282
May-Phillips, H. A. 2592
Mayer-Miebach, E. 2143
Mayfield, C. I. 2405
Maynes, R. 401
Mayo, A. W. 413, 2336
Mayton, H. 576
Mayze, J. L. 122
Mazas, M. 2194, 2827
Maziero, R. 1403
Mazierski, J. 1588, 3846
Mazure, N. 522
Mba, C. C. 692
Mbewe, A. 2258
Mead, G. 2269
Mead, G. C. 836, 876, 993, 1869, 1903, 2033, 2128
Meaney, B. J. 1264
Meckes, M. C. 3195
Medema, G. 2226
Medina, L. M. 2088
Medina, M. del R. 862
Medina, V. F. 2499
Medve, J. 552
Medvedeva, S. A. 571
Meena, G. 484
Meer, J. R. van der 253
Megharaj, M. 1553
Meher, K. K. 2354, 3393
Mehlhart, G. F. 3740
Mehna, A. 2661
Mehnert, D. U. 3364
Mehta, A. 180
Mehta, M. H. 3408
Mehta, U. 906
Mei, H. C. van der 1018, 3009
Meier-Ploeger, A. 357
Meij, J. van der 686, 3752
Meireles, M. C. A. 72
Meisels, M. 3227
Meisinger, J. J. 611
Melcer, H. 524, 579, 2444, 3464
Melcion, D. 1975
Melin, E. S. 2555
Melvin, W. T. 797
Membré, J. M. 252, 920, 1995, 3106
Menasharov, M. 1977
Mendenhall, T. C. 377
Mendes, B. 3136
Mendes Faia, A. 92
Méndez, R. 1673, 2347
Mendez, R. 2317, 2319
Méndez, R. J. 3275
Méndez-Alvarez, S. 1807
Mendoza, N. S. 2383
Mendoza Sánchez, L. 693
Meng, J. 1073
Meng, M. 3456
Menon, A. G. 2591
Menon, K. 2757
Menut, C. 2864
Menziani, G. 2035
Mercado, G. 3375
Mercado, R. 25
Mercier, P. 2644
Mergeay, M. 2427, 3502, 3827
Merka, W. C. 2240
Merwe, M. van der 697
Messi, P. 2035
Messmer, M. 2745
Mester, T. 3182
Mészáros, L. 1871
Metaxopoulos, J. 983, 987
Metcalfe, T. G. 2958
Metzger, M. 1660
Meulenbergh, R. 2732
Meunier, G. 381
Meunier, M. A. 2653-2654
Meusel, M. 3418
Meyer, A. S. 1094
Meyer, B. 3538
Meyer, C. P. de 3211
Meyer, R. S. 1988
Meyer-Jens, T. 1223
Meylan, W. 304
Meylan, W. M. 2244
Mezrioui, N. 294, 331, 3162, 3169
Micarelli, R. 3891
Michaeli, R. 86
Michaelsen, T. 2876
Michail, M. 3389
Michalski, H. 709
Michel, F. C., Jr. 3630
Michel, Y. 2820
Micusan, V. V. 41
Middlebrooks, E. J. 2794
Midthun, D. B. 3907
Mierzewski, S. 590
Miettinen, I. T. 1029, 1749
Mihailova, V. I. 205
Miháitz, P. 1180
Mihara, M. 1394
Mihelcic, J. R. 3461
Miikki, V. 3302
Mikell, A. T., Jr. 3535
Mikhaleva, N. I. 2770
Miki, W. 221, 2176
Miksch, K. 1736
Milagres, A. M. F. 814
Milandri, A. 2014
Milanesi, L. E. 1058
Milburn, A. 340, 3909
Milbury, J. D. 1850
Miles, C. A. 245
Millan, J. C. 953
Miller, A. J. 134, 974, 996, 998, 1032, 2991
Miller, F. C. 350, 2294
Miller, G. C. 3089
Miller, J. D. 62
Miller, K. 2947
Miller, L. G. 626, 915
Miller, M. E. 3563
Miller, M. F. 977, 2038
Miller, M. L. 1058
Miller, R. G. 1940
Miller, R. K. 135
Miller, R. M. 3553, 3623, 3651
Miller, R. N. 3240
Miller, T. 1385
Millette, D. 3403
Milley, D. G. 3896
Milliere, J. B. 2173
Millner, P. D. 2308
Mills, L. 1879
Milstein, O. 1465
Milton, D. 2919
Minagawa, T. 1627
Minami, K. 652
Minamiguchi, K. 2766
Minamiura, N. 465, 1503
Minamiyama, Y. 296
Minekus, M. 1061
Minelli, V. 464
Ming, X. 2207
Ming Tien 3880
Mingneau, C. 683
Mino, K. 3843
Mino, T. 1302
Minton, N. P. 1957
Mintz, E. 2947
Mirgain, I. 630
Mirocha, C. J. 75
Mise, K. 2197-2198
Mishra, A. K. 1978, 2108, 2221, 3547
Mishra, P. N. 1182
Mishra, S. K. 1542
Misiti, A. 1633
Misra, A. K. 2081, 2705
Mitchell, B. A. 1850
Mitchell, D. S. 1861
Mitchell, G. A. 1076, 2192
Mitchell, G. E. 122
Mitchell, G. F. 29
Mitchell, L. K. 3670
Mitsuda, H. 3609
Mitsumoto, T. 3280
Mittal, I. D. 713
Mittenhuber, G. 1812
Miura, K. 2424
Miura, Y. 1589
Miyachi, N. 2509
Miyadzu, T. 1569
Miyahara, M. 2197-2198
Miyamoto, T. 1939
Miyazawa, F. 1919
Miyazawa, K. 2030
Mizobuchi, S. 221
Mizukami, N. 1478, 2478, 3531
Mizumoto, C. 2875
Mizunashi, W. 3499
Mkrumyan, N. 1791
Mladenovska, Z. 2724
Möbius, C. H. 1729
Modgil, R. 906
Moens, L. 3602
Moerman, W. H. 749, 2674
Mohagheghi, A. 474
Mohan, K. S. 796
Mohan, P. M. 2615
Moharib, S. A. 3759
Mohsenzadeh, M. 2996
Moir, J. W. B. 3635
Moir, R. 146
Moiseenko, L. V. 3806
Mokrejš, M. 1575
Moletta, R. 1177, 2625
Molin, G. 1787
Molina, O. 3511
Molins, R. A. 966, 2049
Moll, A. 148
Molleda, J. A. 2310
Møller, I. H. 1618
Molloy, P. 2203
Molz, F. J. 1487
Momonoi, K. 1788, 2431
Mona, M. H. 3820
Mona Kshirsagar 3722
Monceaux, D. A. 2498
Monge, R. 2097, 2828
Monica Joshi 2487
Monk, J. D. 1943, 2145, 2977
Monna, L. 3501
Monroy, O. 1768, 2314-2315
Monsalve-González, A. 874, 3078
Montalvo, S. J. 753
Montefinale, T. 2114
Monteil, H. 630
Monteith, H. 3464
Monteith, H. D. 524
Montemagno, C. 523
Montemagno, C. D. 527, 1500
Montemayor, I. 1479
Montes C. 752
Montesalvo, M. 3064
Monticelli, L. S. 2182
Montpetit, C. 3063
Montpetit, D. 35
Montville, T. J. 1060, 3087
Moore, J. D. 387
Mooney, J. 3121
Moore, B. E. 2178
Moore, E. 1787, 2745
Moore, E. R. B. 3425
Moore, J. 1004
Moore, J. A. 1356-1357
Moore, M. 3567
Moore, M. A. 2880
Moore, M. M. 969
Moore, N. J. 2903
Moormann, M. 2747
Mora-Ventura, M. A. T. 941
Mora-Ventura, M. T. 117, 119, 2020
Morace, G. 2836, 3187
Morag, E. 1789
Morais, P. V. 858
Moral, A. del 2233
Morales, P. 872, 2704, 2728
Moran, A. P. 3121
Moreau, M. 1632
Moreira, L. 858
Morel, F. M. M. 3663
Morel, J. 590
Morel, J. L. 2525
Morelli, I. S. 2267
Moreno, A. 637, 3639
Moreno, E. 2639
Morgan, I. R. 2050
Morgan, J. A. W. 3176
Morgan, J. B. 3026
Morgan, M. R. A. 2058, 2171, 2775
Morgan, R. L. 1771
Morgan-Sagastume, J. 2626
Morganti, R. 2908
Mori, M. 2103-2104
Mori, N. 1630
Mori, T. 3012, 3014, 3018
Morillon, M. 2080
Morimoto, M. 2492, 2565
Morimura, S. 463, 468, 2642
Morin, A. 3383
Morin, D. 1754, 2670
Morinigo, M. A. 435, 492, 3139
Morita, O. 2225
Moriyama, Y. 1017
Morlot, M. 2273
Mormile, M. R. 1432
Morohoshi, N. 2493, 2565
Morosoli, R. 802
Moroz, O. M. 3380
Morper, M. R. 1295
Morrell, J. J. 1016
Morris, J. G. 3423
Morris, R. 3076
Morrison, D. 1426
Morrone, S. 690
Morse, J. S. 3474
Mortensen, E. 2520
Mortenson, L. E. 2739
Morton, L. H. G. 1019
Morton, R. L. 3304
Morvan, J. 2636
Moschetti, G. 988, 3084
Moshiri, G. A. 1360
Mossel, D. A. A. 149, 861, 1056, 1059
Mosso, C. 2874
Mosso, M. de los A. 862
Mostafa, M. E. 1937
Mostert, J. F. 2646
Mot, R. de 3620
Motegi, K. 3730
Motlagh, A. 799
Mott, S. J. 960
Mottice, S. 3122
Motto, H. 3220, 3228
Mouga, T. 3024
Mould, N. 1581
Mourato, D. 3802
Moustafa, S. I. 2091
Mouzin, G. 2369-2370
Moyal, P. 77
Moyer, N. P. 2885
Moyes, A. 257
Moys, G. R. 1485
Moysen, E. 3301
Mrnuštková, P. 2613
Mroz, R. C. 860
Mshensky, Y. N. 3564
Mtz-Viturtia, A. 3352

- Mu, D. Y. 3559
Mudholkar, V. 317
Mueller, R. F. 197, 3680
Muir, P. R. 900
Mukataka, S. 2998
Mukhitova, F. K. 1594
Mukouyama, M. 2560
Mulak, V. 2017
Mulder, A. 3326
Mulder, R. 3326
Mulholland, D. A. 1446, 1739
Müller, A. 148
Müller, B. 2598
Müller, C. 2537
Muller, E. B. 1283, 1781
Müller, H. E. 22
Müller, M. 2472
Müller, R. 2452, 2942, 3839
Müller, R. H. 1524
Müller, R. J. 606, 2564
Mullerat, J. 1002, 3062
Mulligan, C. 2644
Munch, B. 1760
Munck, J. 1726
Müncnerová, D. 580, 1506
Muniruzzaman, S. 475
Muniz, M. 1665
Muno, H. 2999
Muñoz, C. 1469
Muñoz, M. 2118
Muñoz, M. A. 492, 3139
Munro, P. M. 2213
Muntada-Garriga, J. M. 2020
Murad, M. 2068, 2074
Murado, M. A. 1479, 3386
Muraka, I. P. 3591
Murakami, A. 448
Murakami, K. 1697
Murakami, M. 114
Muralledharan, T. R. 2601
Muramatsu, A. 3753
Muramatsu, K. 1823
Murano, E. A. 140, 976, 1036
Murano, P. S. 1036
Muraos, S. 2766
Murata, A. 2760-2761
Murayama, T. 3451-3452
Murga, R. 2706, 3866
Muriana, P. M. 145, 214, 3081
Murinda, S. E. 3080
Muro-Pastor, M. I. 3867
Murphy, C. K. 151
Murphy, K. L. 787
Murphy, R. 225
Murray, C. M. 2307
Murray, K. 3784
Murray, K. S. 320
Murrell, J. C. 658
Murru, N. 2976
Murthy, M. V. S. 2354
Murthy, R. C. 1917
Murti, T. W. 3855
Murty, M. V. S. 748
Murugkar, H. V. 2127
Musaiger, A. O. 2815
Muscillo, M. 235, 3891
Musgrove, M. T. 2992
Muslu, Y. 384, 3253
Musmanno, R. A. 3128
Musmeci, L. 2243
Musterman, J. L. 1662
Mustin, C. 3793
Musuku, A. 61
Musumeci, M. R. 2570
Musvoto, E. V. 1323
Mutoh, K. 1569
Mutti, P. 1983
Muxi, L. 1381
Muyibi, S. A. 1751
Muyima, N. Y. O. 3746, 3748
Myers, C. R. 1161
Myers, D. J. 2049
Myers, E. R. 1083, 1099
Myers, J. M. 1161
Myles, T. G. 191
Nachaiyasit, S. 2351
Naclerio, G. 3085
Nadim, L. M. 585
Nagahama, K. 1786
Nagai, S. 2287, 2551
Nagasawa, N. 746
Nagasawa, S. 3625
Nagasawa, T. 771
Nageswar, G. D. 2665
Nagle, P. T. 340, 3909
Nagy, I. 3620
Naidoo, N. 1446, 1739
Naik, G. N. 220
Naim-Uddin 282
Nair, M. V. 195
Nair, P. M. 220, 1037, 1887
Nair, S. 2212
Nair, V. K. S. 2362
Naito, N. 504
Naito, T. 1627
Najafpour, G. D. 1400
Nakabayashi, K. 3529
Nakache, F. 3037
Nakahara, T. 1413, 3381
Nakajima, H. 3601
Nakajima, J. 2894
Nakajima, K. 3847
Nakajima, M. 1239
Nakajima, T. 1413, 3381
Nakamura, E. 296
Nakamura, H. 3730
Nakamura, K. 652, 1441, 3900
Nakamura, L. K. 2438
Nakamura, M. 3642
Nakamura, T. 3499
Nakamura, Y. 1630, 3847
Nakanishi, H. 2196
Nakano, H. 1387
Nakao, M. 1630
Nakasone, H. 2335
Nakatsuiji, Y. 3642
Nakayama, T. 2225
Nakazawa, T. 2165
Nakhla, G. F. 2539
Námer, J. 1772
Nand, K. 2489
Nanda, G. 2376
Nandakumar, M. P. 544
Nandy, T. 2286
Nanmori, T. 3901
Nannipieri, P. 2814
Naranjo, J. 2888
Naranjo, J. E. 2868, 3255
Narasimhan, K. S. 81
Narasimhan, R. 2086
Narayan, K. G. 887
Narayanan, B. 2695
Nardi-Dei, V. 3840
Narkis, N. 298, 1642, 3163
Narros, G. A. 2310
Nascimento, M. J. 3136
Naseem Akhtar 2615
Nash, B. 1251
Nash, L. J. 3829
Nasir, A. 3107
Nasreen Zaidi 163
Nasser, A. M. 2884, 2904, 3146, 3340
Natarajan, K. A. 3795
Natsuda, O. 2733
Navarrete, A. 2148
Navarro, J. M. 2566
Naveau, H. 3536
Navratil, J. S. 3035
Nawaz, M. S. 1456
Nazal, A. 814
Nazer, A. H. K. 2996
Nazina, T. N. 3404
Nazir, S. 163
Naziruddin, M. 1514
Ndapwadza, T. 2587
Ndife, J. 1926
Nedland, K. T. 2280
Needwell, D. B. 3443
Neelam Kewalramani 2752
Neelima Garg 104
Neeraj Jain 2663
Neethling, J. B. 446
Negoro, S. 3608-3609
Neidhart, S. 1458
Neller, A. 668
Nelson, S. M. 3826
Németh, P. 1678, 3718
Nepote, M. C. 80
Nerantzis, E. T. 1418
Nerud, F. 1013
Nesheim, S. 1959
Neto, J. S. A. 734
Netten, P. van 1056, 1059
Netter, R. 1334, 1623
Nettles Cutter, C. 967
Neu, K. E. 1396
Neu, T. R. 1018
Neufeld, R. D. 578
Neugebauer, A. 1231
Neumann, A. 2454, 2745
Nevalainen, A. I. 210
Neves, L. 1121
Newbill, M. A. 1016
Newbry, B. W. 1773
Newby, P. S. 3772, 3780
Newcombe, G. 1741
Newland, M. 3241
Newman, R. D. 3694
Newton, C. 260
Newton, G. L. 2688
Newton, T. W. 1576
Ng, A. 797
Ng, D. L. K. 840
Ng, K. Y. 389, 1237
Ng, N. J. 2637
Ng, W. J. 389, 1237, 1427, 2392
Nguyen, D. 2918
Nguyen, K. M. 1650
Nguyen, V. T. 2554, 3265
Nguyen-the, C. 216
Nguyen-The, C. 935, 2010
Nhien, T. T. H. 3306
Niaki, S. 578
Nicand, E. 95
Nichols, G. 2839
Nichols, G. L. 2028
Nichols, N. N. 3413
Nichols, P. D. 2716
Nichols, S. 2787
Nicol, J. P. 1487
Nicolaides, L. 118
Nicole, M. 2099
Nicoletti, R. 1131
Nidetzky, B. 545, 548
Nie, X. T. 16
Niebla, A. 1050
Niederhauser, C. 884
Nielsen, B. 761, 2520
Nielsen, M. K. 672, 2620
Nielsen, P. H. 666, 820, 1288, 1309, 1445, 1614, 3356
Niemelä, S. I. 2923, 3134
Niemi, J. S. 3142
Niemi, R. M. 3142
Nieuwstadt, T. J. 2242
Niewolak, S. 859, 2223
Nigam, K. D. P. 1844
Nigam, N. 195
Nigam, P. 3387
Nigatu, A. 2933
Nijhof, M. 3303
Nikkuni, S. 2928
Nikolaev, A. I. 494
Nikolov, L. 677
Nikulin, M. 204
Nilsson, A. 889
Nilsson, B. 1718
Nilsson, P. Å. 3339
Ninomiya, K. 2430
Nirmala Thampuran 3100
Nirmalakhandan, N. 401, 3768
Nishi, M. 2712
Nishibayashi, M. 3444
Nishida, H. 1450
Nishidome, K. 1394
Nishihara, M. 2353
Nishihara, T. 594
Nishikawa, J. 594
Nishimune, T. 2925
Nishimura, A. 502
Nishimura, K. 933
Nishino, S. F. 3248
Nishio, N. 2287, 2551, 3705
Nishiyama, N. 1424
Nishizawa, Y. 3529
Nissen, H. 128
Nitisoravut, N. 1190
Nitisoravut, S. 3720
Nitta, Y. 393
Nitterauer, J. D. 507
Nitti, G. 542
Nivault, N. 2273
Niven, D. F. 679
Noble, R. 1238
Nogales, R. 1612
Noguchi, T. 2030, 3862
Noguti, Y. 613
Nohynek, L. J. 3422
Noike, T. 413, 434
Nolan, A. M. 3385
Noilleau, V. 2566
Noller, B. N. 1359
Nonaka, T. 3012, 3014
Nor, Y. M. 589
Nordeidet, B. 1391, 1638
Nordhaus, R. 2508
Nørrung, B. 2842
Norsker, N. H. 3356
Nortje, G. L. 863
Notermans, S. 57, 836, 876, 1091, 1869, 1903, 2190
Notermans, S. H. W. 1929, 1942
Noto, L. di 2964-2965
Noüe, J. de la 2274, 2686
Nour El-Din, H. 2337
Novak, L. 1324
Novel, G. 954, 2167
Novotná, E. 1013
Noyola, A. 2626
Nozaki, M. 618
Nozhevnikova, A. 1566
Nozhevnikova, A. N. 2744, 3807
Nuero, O. M. 2758
Numa, T. 719
Nundy, D. C. 1968
Nunes, P. G. A. 2234
Núñez, M. J. 549
Nurmi, E. 986
Nurmiaho-Lassila, E.-L. 3422
Nuttall, H. E. 3655
Nyberg, U. 3704
Nybroe, O. 1079
Nychas, G. J. E. 154, 2153
Nygaard, K. 1124
Nyhuis, G. 704
Nyns, E. J. 3536
Nystrom, G. J. 2929
Oakley, C. 3289
Oba, K. 2424
Obana, H. 2925
Obata, T. 1835
Obaya, M. C. 720, 2647
Obi, S. K. C. 2470
Obón de Castro, J. M. 3832
Obraztsova, A. Ya. 3179, 3477
O'Brien, B. 262
Obst, J. R. 186
Obuekwe, C. O. 185
Ochi, A. 613
Ocio, M. J. 925
O'Connor-Shaw, R. E. 2949
Oda, K. 3837
Oda, S. 517
Odake, H. 2424
Ødegaard, H. 1147, 1173, 1391, 1619, 2276, 2629
Odegaard, H. 3732
Odelson, D. A. 501
O'Dette, R. G. 2236
O'Donnell, A. G. 632
Odunfa, S. A. 103
Oever, E. van't 3702
Offer, R. 3163
Ogan, M. T. 1860
O'Gara, F. 3439
Ogata, S. 757
Ogawa, T. 525, 1786, 2666
Ogbulie, J. N. 9
Ogden, I. D. 1106, 2850
Ogden, R. C. 2717
Ogert, R. A. 53
Oggel, J. 878
Oggel, J. J. 1968
Oggel, M. 999
Ogi, T. 3346
O'Grady, D. 531
Ogunseit, O. A. 308
Ogura, N. 1569
Oguri, K. 564, 3444

- Oh, D. H. 806, 1035, 2026, 2163
 Oh, Y. S. 572
 O'Hanlon, K. 3385
 Ohara, H. 3862
 Ohashi, A. 1268
 Ohba, A. 2321
 Ohba, E. 2430
 Ohgaki, S. 340, 2860, 3909
 Ohkawa, A. 2332
 Ohkuma, N. 443
 Ohmomo, S. 757
 Ohmura, N. 470, 3794
 Ohta, H. 517
 Ohta, K. 1116
 Ohta, S. 3058
 Ohtake, H. 1666, 3753
 Ohtsuki, K. 3609
 Oie, S. 2098, 2165
 Ojha, C. S. P. 740
 Ojior, O. O. 3143
 Okabe, S. 666, 820, 2358
 Okada, H. 2766, 3608
 Okamura, K. 652
 Okamura, T. 3840
 Okaniwa, Y. 443
 Okazaki, M. 546
 Okazaki, S. 2437
 Okeke, B. C. 615, 2470
 Okoji, C. N. 50
 Okolo, B. N. 478, 916
 Okpokwasili, G. C. 9, 3008
 Okubo, T. 448
 Okuda, M. 2398
 Okunev, O. N. 2770
 Okuzumi, M. 1098
 Olama, Z. A. 1475
 Olasupo, N. A. 103
 Oldfield, C. 3829
 Oldham, W. K. 425
 Olenchock, S. A. 2308
 Oleskin, A. V. 3400
 Olfenbuttel, R. F. 832, 2793
 Olguin, E. J. 3216, 3375
 Olguin, E. J. 2299
 Olguin-Castillo, C. M. 1677
 Oliferchuk, V. P. 3755
 Olikka, P. 3683
 Oliva, M. A. 3888-3889
 Oliveira, J. S. 3136
 Oliver, J. D. 937, 2025, 2029
 Olivieri, V. P. 2867
 Oljačić, E. 131
 Ollinger-Snyder, P. 3046
 Ollivier, B. 660, 1436, 3454
 Ollivier, P. 667, 1754, 2670
 Olowu, R. A. 898
 Olphen, M. van 2902
 Olsen, J. E. 852
 Olson, B. H. 851, 3038
 Olson, D. G. 140, 1036, 1043-1045, 2049
 Olson, E. S. 3570
 Olson, G. J. 3658
 Olson, M. E. 2841
 Olsson, G. 17
 Olsson, G. 2327
 Olsson, G. 3799
 Olsson, L. 474, 3379
 Olukoya, D. K. 103
 Oman, J. S. 2044
 Omar, S. A. 113, 1525, 3513
 Omari, M. B. 2009
 Omori, T. 1447, 2509, 3501
 Omuetti, J. A. I. 355
 Oncins, L. 2950
 Ong, S. L. 389, 1237, 3366
 Ongerth, J. E. 60, 2918, 3144
 Ono, D. 3642
 Onuma, K. 456
 Onysko, K. A. 2655
 Oohira, Y. 2332
 Ooi, B. L. 2308
 Ooi, T. 2766
 Ooshima, H. 2483
 Oostrom, A. J. van 1331, 1367
 Oppermann, F. B. 2746
 Oranusi, S. U. 916
 Orbay, L. 187
 Orden, J. A. 1947
 O'Reilly, A. M. 3821
 Oremland, R. S. 626, 3448, 3696
 Oren, A. 3277, 3471
 Orhon, D. 1559
 Ormerod, K. 1052
 Oron, G. 461
 Oross, D. 2690
 O'Rourke, N. 232
 Orr, M. P. 3089
 Orser, C. S. 591, 610, 781
 Orshansky, F. 298, 3163
 Orsi, C. 3086
 Orsini, P. 235, 3891
 Ortega-Calvo, J. J. 196, 2118, 2121-2122, 2124, 3016, 3560
 Orth, A. B. 3001, 3518, 3880
 Ortigosa, M. 1107
 Osada, S. 594
 Osada, T. 3808
 Osako, M. 762
 Osato, D. W. 1941
 Osborne, P. L. 1343
 Oser, A. 974
 Oshida, T. 1627
 Oshiro, R. K. 851
 Osipov, G. A. 2744
 Ostarcevic, E. R. 1609
 Ostiz, S. de B. 2570
 Ostruschka, M. 3073
 Osumi, M. 504
 Oswald, B. 1448
 Oswald, W. J. 3694
 Otaki, N. 2176
 Oterholm, B. 2643
 Otero, A. 250, 2054-2055
 Otero, M. A. 85
 Otsuka, H. 1627
 Otsuka, S. 2492
 Ott, M. 13
 Ottaviani, D. 2964-2965
 Ottaviani, F. 2914
 Otte, M. P. 322
 Ottengraf, S. 2742
 Ottengraf, S. P. P. 2350, 3307
 Otterpohl, R. 339, 1201
 Ottow, J. C. G. 3329
 Otumu, E. J. 903
 Ou, L. T. 3473
 Ouchiyaama, N. 1447
 Oudot, J. 2525
 Ouellette, G. B. 2099
 Oufdou, K. 3169
 Outwater, A. B. 2792
 Ouyang, C. F. 1210
 Overend, R. P. 3914
 Overmeire, A. 669, 2516
 Overmeyer, C. 2458
 Overton, E. 3548
 Owen, E. 540
 Owen, M. 381
 Owen, M. D. 365
 Owens, J. D. 112
 Oyesiku, O. O. 269
 Oyofe, B. A. 3894
 Ozaki, M. 2335
 Ozanne, G. 3063
 Ozawa, G. 1232, 2321
 Özcengiz, G. 1573
 Özden, M. Y. 2571
 Ozimek, L. 182
 Öztürk, I. 1186, 1717
 Pace, N. R. 3851
 Pacini, R. 1085, 2031, 2908
 Packer, P. J. 1916
 Padival, N. A. 1024
 Padova, F. di 892
 Paffoni, C. 1261
 Pagano, M. 1398
 Page, A. L. 3695
 Page, W. J. 3611
 Pagga, U. 391, 1423
 Pagilla, K. R. 1156
 Pagotto, F. 2137
 Pahan, K. 1577, 2594
 Pahlow, G. 2689
 Pahn, M. A. 510
 Pai, S. L. 2535
 Paice, M. G. 3520, 3778
 Paik, B. C. 3814
 Paik ByeongCheon 3814
 Paineira, M. T. 2267
 Paine, S. 3007
 Painter, H. A. 1854
 Paknikar, K. M. 657
 Pal, N. 2556, 3584
 Palacios, J. M. 202
 Palfreyman, J. W. 213
 Palleria, S. 2659
 Palleroni, N. J. 3422
 Pallotta, M. L. 2195
 Palmateer, G. 3075
 Palmer, C. J. 2857
 Palmer, P. D. 1576
 Palmieri, G. 542
 Palomares, J. C. 39
 Palomo, A. 196
 Palumbo, A. V. 2263, 2532, 3177, 3565
 Palumbo, S. A. 974, 1049
 Palvall, B. 1702
 Pampulha, M. E. 1121
 Pan, B. F. 3486
 Pan, J. 1595
 Pan, M. 2317
 Pan, Z. D. 539
 Pan BingFeng 3486
 Panà, A. 2836, 3187
 Panchanadikar, V. V. 2586
 Panchang, W. 2939
 Panchwagh, A. M. 3393
 Pancorbo, O. C. 2240
 Panda, T. 2384
 Pandey, K. K. 2366
 Pandey, N. K. 2066, 2909
 Pandey, R. A. 2673
 Pandian, S. 3088
 Pandit, V. A. 231
 Panerio, E. G. 2383
 Panigrahy, B. 1771
 Panina, L. 2112
 Panizzi, L. 2031
 Pankhania, M. 346
 Pankratz, H. S. 437
 Pannier, M. 1310
 Panno, M. T. del 2267
 Panter, K. 368
 Papa, A. 2065
 Papadakis, J. A. 8, 26
 Papadotopoulou, M. 26
 Paparella, A. 2046
 Papathanasopoulos, M. A. 58, 1003
 Papkov, G. 3310
 Papoutsopoulou, S. V. 2378
 Pappathi, R. 3365
 Paquet, A. 11
 Para, L'. 1970
 Paraless, R. E. 774, 3413
 Paranjpye, R. 1042
 Paranjpye, R. N. 2956, 2960
 Parati, F. 3664
 Parawira, W. 1674
 Pardue, J. H. 2265
 Parekh, N. R. 1562, 1565
 Paris, D. 3801
 Parish, M. E. 1999, 2943-2944
 Parisi, E. 1009, 2019, 2037
 Park, C. H. 777
 Park, D. H. 2334
 Park, D. L. 938
 Park, J. J. 1197
 Park, J. K. 201
 Park, S. C. 3813
 Park, S. F. 258
 Park, S. J. 3137
 Park, T. J. 1197
 Park, Y. K. 805, 1784
 Parke, D. 3595
 Parker, C. E. 2627
 Parker, D. 1211
 Parker, D. R. 3695
 Parker, D. S. 382, 1262
 Parker, M. L. 1880-1881
 Parker, R. 1076
 Parker, R. W. 946
 Parker, W. 3464
 Parker, W. J. 524, 2444, 2655
 Parkin, G. F. 498
 Parkinson, N. 1997
 Parodi, E. 3313
 Parodi, G. 3313, 3330
 Parpari, L. 3367
 Parrington, L. J. 3908
 Parry, S. 59
 Parshina, S. N. 3807
 Parsons, J. R. 3442, 3472
 Parten, S. 383
 Pasanen, A. L. 204
 Pascat, B. 3514
 Paschalidis, G. 1681
 Pascik, I. 1636
 Pask, D. A. 387
 Paspaliaris, P. 211
 Paster, N. 1977
 Pasti-Grigsby, M. B. 1449
 Pastor, F. I. J. 2727
 Pastrana, L. M. 3386
 Paszczynski, A. 1449
 Patarata, L. 92
 Patchell, C. J. 15
 Patel, A. R. 3456
 Patel, B. K. C. 2713
 Patel, B. N. 3804
 Patel, C. 1390
 Patel, J. R. 2202, 2204
 Patel, K. A. 3408
 Patel, R. N. 500, 664
 Patel, S. 899
 Patel, S. J. 3408
 Patel, T. R. 598
 Paterek, J. R. 3449
 Paterson, A. 615
 Paterson, R. R. M. 2215
 Pathak, S. P. 1915, 1917, 2227
 Patil, A. 713
 Patiti, A. M. 235
 Patni, N. K. 1254
 Patruno, J. 1350
 Patry, G. 338, 3256
 Patterson, B. M. 3222
 Patterson, M. F. 2072, 3045
 Paul, J. 3527
 Paula, C. R. 72, 2934
 Paulsch, W. E. 899
 Paulson, D. S. 839
 Paulsrud, B. 2280
 Paulus, W. 831
 Paus, A. 577, 3492
 Pavan, P. 2692
 Pavlostathis, S. G. 1220, 1426, 1691, 2457
 Pavlů, L. 2574
 Pavón, V. 1807
 Payment, P. 2891
 Payne, G. A. 2858, 2929
 Payne, G. F. 3456
 Payraudeau, M. 1304
 Peake, B. 2220
 Peberdy, J. F. 2805
 Pece, N. 3511
 Peck, M. W. 890, 2209, 2877, 2907, 3047
 Peçonek, J. 2963
 Pedahzur, R. 3340
 Pedersen, A. R. 2503
 Pedersen, J. A. 1726
 Pedrelli, T. 1983, 2948
 Pedrosos, D. M. M. 1119
 Peduzzi, P. 3090
 Pée, K. H. van 2452
 Peeler, J. T. 120
 Pehl, B. 303
 Peinador Brolatto, M. 1914
 Peláez, F. 2769
 Pełczyńska, E. 985
 Pelizzoni, F. 568
 Pelkonen, M. 1289, 3327
 Pelletier, E. 665
 Pelon, W. 2177
 Pelroy, G. A. 1041-1042, 2956, 2960
 Peltola, J. 2426
 Pemberton, J. M. 1853, 2922
 Pembroke, J. T. 531
 Peña, M. A. 85
 Peña Cabrales, J. J. 3216
 Peng, C. G. 201
 Peng, J. 418
 Peng, J. B. 3854
 Penillard, P. 381, 3699
 Pennerstorfer, C. 530
 Penney, N. 949, 960, 962
 Pepe, O. 988, 3084

- Pepe, T. 2976
 Pepper, I. L. 1144, 1780, 2773, 2776, 2869, 3161, 3623
 Pera, A. 3279
 Perdi, A. 634
 Pere, J. 729
 Perestelo, F. 1467
 Pérez, M. C. 426
 Pérez, P. 1832, 3882
 Pérez-García, A. 3155
 Pérez-González, J. A. 810, 2704, 2728
 Pérez Rodríguez, J. L. 1233, 1379
 Perfil'ev, G. D. 178
 Perhij, A. 3898
 Péringer, P. 512
 Peris Toran, M. J. 101
 Perkins, P. S. 604
 Perle, M. 3765
 Pernitsky, D. J. 3786
 Perotti, N. 3511
 Perraud, I. G. 2415
 Perret, J. M. 1259
 Perrotta, J. A. 3437
 Perrucci, S. 3079
 Perry, J. J. 574, 1518, 2719, 3496
 Persaud, A. T. 1158
 Peschen, N. 1194
 Pestka, J. J. 1961
 Peter, K. 3200
 Peter-Fröhlich, A. 404
 Peterkin, P. I. 3908
 Peters, D. L. 907
 Petersen, G. 2337
 Petersen, J. N. 511, 526, 663, 1579, 3415, 3798
 Peterson, H. G. 3149
 Peterson, M. 1042
 Peterson, M. E. 1041, 2956, 2960
 Peterson, S. M. 3125, 3194
 Petit, E. 3657
 Petitdemange, E. 343
 Petitdemange, H. 2718, 3537
 Petitt, S. B. 883
 Petkova, G. 2295
 Petrovic, A. M. 620
 Petrozzi, S. 3687
 Petruschka, L. 2537
 Petruševski, B. 3788
 Petter, J. G. 2995
 Pettersson, B. 2482
 Pettersson, G. 2482
 Pettibone, G. W. 1905
 Peyton, B. M. 3866
 Pfeffer, J. T. 3272
 Pfeifer, J. 1088
 Pfiffner, S. M. 2263
 Pflugmacher, U. 1415
 Phale, P. S. 2448, 2738
 Pham, H. N. 2159
 Pham, T. T. 3588
 Pharr, M. D. 994
 Phelps, T. J. 2263, 2740
 Phibbs, P. V., Jr. 779
 Philip, L. 2601, 3654
 Philipp, H. R. 3599
 Philippe, L. M. 2883
 Phillips, J. G. 239, 1105
 Phillips, P. 3224, 3652
 Phillips, S. I. 1976
 Phillips, T. M. 2475
 Piani, M. 30, 2881
 Piar, G. 877
 Piar, J. C. 2167
 Picard, G. 2274, 3088
 Picardal, F. 3436
 Piccinin, D. M. 2095
 Pichon, R. 1134
 Pickard, M. A. 323, 3459
 Pickin, S. R. 1637
 Pickup, R. W. 3176
 Picone, T. 851
 Piecková, E. 1011
 Pieper, D. H. 654
 Pierson, D. L. 1542
 Pierson, M. D. 830
 Pierzo, V. 1217
 Pietersen, B. 2133
 Piette, J. P. G. 2973
 Pigdon, S. P. 1306
 Pignato, S. 2912
 Pike, E. B. 280
 Pilet, M. F. 2167
 Pillai, S. D. 860, 2776
 Pimental, M. S. 92
 Pin, C. 869, 2210
 Piñaga, F. 2704
 Pinder, A. C. 1859
 Pinder, K. L. 424, 528, 1721, 3344
 Pinfeld, J. V. 1876
 Ping-Ping, C. 3406
 Pinnette, J. R. 2306
 Pinto, A. C. di 1389
 Pinto, L. 3567
 Pintó, R. M. 3065
 Pipes, W. O. 2548
 Pipke, R. 2735
 Pisani, G. 2836, 3187
 Pistaccio, L. 1753
 Pistorio, M. 747
 Pitman, A. R. 2635
 Piton, M. A. de J. 1946
 Pitt, J. I. 3130
 Pivetz, B. E. 3626
 Plachý, P. 289
 Plante, R. 1891
 Platt, M. W. 3061
 Platzer, C. 1623
 Plaza, E. 1603
 Pleass, W. 2192
 Pless, P. 51
 Ploeg, J. van der 3842
 Poch, M. 1329
 Podeh, M. R. H. 599
 Podgornik, H. 3898
 Poh, C. L. 2212
 Pohde, K. 744
 Pohlshörder, M. 2490
 Poiger, T. 3636
 Poikolainen, M. L. 3142
 Poletti, R. 2014
 Polidoro, M. 3569
 Polman, J. K. 2675
 Polman, K. 2385
 Polo, F. 2845
 Pometto, A. L., III 1924
 Pommarès, P. 3760
 Pommepuy, M. 274, 1135, 3153
 Pompei, M. 2014
 Ponce-Noyola, T. 699, 2481
 Ponomarev, A. V. 1377, 1384, 2709
 Pons, M. P. 480
 Ponti, C. 3262-3263
 Poole, R. K. 2132
 Poole, S. E. 122
 Poolman, B. 520
 Poorter, M. P. de 1196, 1558
 Pöpel, H. J. 405, 2634
 Popoff, M. R. 38
 Popp, L. 1258
 Poppelier, M. J. G. 2090
 Porretta, S. 102
 Portal Pedroso, A. 718
 Portegies-Zwart, I. 2350
 Porter, A. J. 2203
 Porter, J. 3176
 Porter, M. R. 2795
 Portugal, F. R. 1963
 Post, A. F. 3341-3342
 Pot, B. 92
 Potapenko, S. A. 1719
 Pothakamury, U. R. 55, 3078
 Pothuluri, J. V. 1495
 Potluri, V. 2984
 Pott, B. M. 3799
 Potter, A. A. 1609
 Potter, W. T. 2741
 Poulsen, L. K. 2703
 Powell, K. A. 2805
 Powell, R. 3121
 Powell, S. C. 1877
 Powelson, D. K. 237
 Power, T. R. 3222
 Powers, D. 578
 Powers, E. M. 2890
 Powlowski, J. 586, 790
 Poysky, F. T. 2956, 2960
 Pozo, C. 2380
 Pozzi, C. R. 72
 Prabhu, G. A. 966
 Prabhu, K. A. 713
 Praderio, G. 203
 Prado, B. 2233
 Prado, V. M. 3030
 Prakash, J. 401
 Prakash, S. 2743
 Prakash Chandra 2595
 Pranamuda, H. 3606
 Prasad, G. 63
 Prasad, H. H. 2144
 Prasertsan, P. 1908, 2318, 2359
 Pratella, G. C. 109
 Pratim Biswas 2771
 Prats, D. 422, 637, 3639
 Prema Viswanath 487
 Premalatha, A. 1531
 Prentice, G. A. 171
 Prepara, E. E. 3151
 Prepara, E. E. 1604, 3149
 Presečki, V. 1072
 Pressdee, J. 3784
 Preston, J. C. 2426
 Preston, J. F. III 3397
 Pretorius, I. S. 1547
 Prévost, M. 855
 Prévot, J. 2879, 3903
 Preziosi-Belloy, L. 2566
 Pribac, F. 3222
 Pribyl, M. 1728
 Price, D. L. 1542
 Price, D. S. 2341
 Price, R. 1746
 Price, W. A., II 3505
 Prieto, M. 2054
 Prieur, D. 3851
 Prince, R. J. 3544
 Prins, J. 3503
 Prior, B. A. 1722, 2754, 3775
 Pritchard, A. M. 2896
 Pritchard, T. J. 125, 2206
 Pritzbuier, E. von 22
 Probert, P. K. 2135
 Procházková, L. 1128
 Prohaska, J. 179
 Proksa, B. 659
 Pronk, J. T. 2732
 Prost, A. M. E. 288
 Prost, C. 1296
 Proulx, D. 2340
 Providenti, M. A. 3410
 Pruett, S. B. 2840
 Pscheidt, H. 2413
 Pubert, D. 2080
 Puertas, F. 196
 Puhakka, J. A. 604, 735, 1527, 1536, 1699, 2555
 Pujalte, M. J. 1107
 Pujar, B. G. 2576
 Pujol, R. 1260, 1314, 1821, 1864, 2313
 Pulgarin, C. 512, 3583
 Pullen, W. 1057
 Puls, J. 538
 Punia, A. K. 1463, 2486
 Puri, V. M. 2987
 Purkarthofer, H. 555
 Purohit, H. J. 1159
 Purushottam Khanna 2778
 Pushalkar, S. 2757
 Pushpa Paul 220
 Puskas, K. 460, 3232
 Puspita, N. F. 3632
 Putter, H. de 106
 Putz, G. 1077
 Puyesky, Y. 3373
 Puzankov, A. G. 750
 Pyatt, A. J. 1581
 Pyatt, F. B. 1581
 Pyle, B. H. 263, 2131, 3192
 Qasim, S. R. 2627
 Qi, S. Y. 1661
 Qian, Y. 1373, 3246
 Qiang, H. 3911
 Qiao, X. L. 130
 Qiting, J. 1730
 Qu, M. 599
 Quagli, E. 1085, 2031, 2908
 Quaglio, P. 2035
 Quarmbay, J. 2290, 3270, 3276
 Quarmbay, S. L. 1902
 Quattroni, G. 592, 595
 Queirolo, M. 1381
 Quensen, J. F., III 3466
 Quentmeier, A. 3845
 Quesada-Chanto, A. 479
 Quevedo-Sarmiento, J. 2639
 Quinn, C. 1969
 Quinn, J. P. 629, 3629, 3713
 Quinn, M. 3045
 Quintana, L. 1576
 Quintavalla, S. 2948
 Quod, J. P. 2022
 Raben, D. P. 994
 Rabinovitch, L. 1895
 Rabus, R. 2508, 2513
 Rachel, R. 3864
 Radford, S. A. 2200
 Radomyski, T. 1036
 Radtke, C. 1429
 Radwan, S. S. 1483, 2502
 Radway, J. C. 2679
 Raghavarao, K. S. M. S. 544
 Raghubeer, E. V. 1988
 Rahim, Z. 2966
 Rahkonen, S. 142
 Rahmani, H. 1650, 3698
 Rai, L. C. 1605
 Rajola, T. 3683
 Raimbault, M. 1406, 2415
 Rainey, F. A. 3835
 Raj, S. P. 3365
 Rajagopal, B. S. 515
 Rajakumar, G. S. 1531
 Rajala-Mustonen, R. L. 767
 Rajaraman, S. 2086
 Rajasab, A. H. 110
 Rajendran, A. 1834
 Rajganes, B. 3430, 3541
 Rajinder Kaur 1474
 Rajoka, M. I. 2491, 2494
 Raju, V. 2667
 Raju, V. S. 713
 Rakesh Pancholi 2752
 Rakha, M. 2013
 Rakhmanin, Y. A. 224
 Ralovich, B. 2788
 Ralph, D. E. 3033
 Ram, M. S. 2241
 Ram Gopal 2909
 Rama Chakraverty 282
 Ramadan, M. A. 1563
 Ramadori, R. 690
 Ramakrishna, C. 1687
 Ramakrishna, M. 2415
 Ramakrishnan, S. 3766
 Ramaprasad, A. 3591
 Ramaraj Boopathy 523
 Ramaratnam, M. 2499
 Ramasamy, M. 389, 1237
 Ramaswami, A. 2676
 Ramaswamy, H. 90, 909
 Ramaswamy, H. S. 1922
 Ramel, C. 419
 Ramesh Maheshwari 2755
 Rameshwar Singh 2752
 Ramirez, F. 1436
 Ramirez, J. L. 819
 Ramirez, M. E. 3375
 Ramirez, M. J. C. 2756
 Ramón, D. 810
 Ramos, A. 1767-1768, 3492
 Ramos, J. 720, 2647
 Ramos, J. L. 3556
 Ramos-Cormenzana, A. 1123, 2639
 Ramsay, B. A. 3614
 Ramsay, D. 3227
 Ramsay, J. A. 3614
 Ramsey, C. B. 977, 2038
 Ramteke, P. W. 1915, 1917, 2227
 Ranade, D. R. 1386
 Ranaivoson, E. R. 495
 Randall, C. W. 1817
 Randle, W. G. 1703
 Randles, S. J. 3691
 Ranganna, S. 2002
 Rangel-Aldao, R. 819
 Rangrass, S. 3393

- Rani, K. S. 1409
 Ranieri, E. 295
 Raninger, B. 3293
 Rankins, D. L., Jr. 1971
 Ransom, G. M. 871
 Ranua, M. 729
 Rao, C. V. 110
 Rao, G. R. 3795
 Rao, K. J. 2384
 Rao, K. K. 2757
 Rao, M. 1806
 Rao, N. 3633
 Rao, N. A. 2738
 Rao, P. R. 2682
 Rao, V. S. 1037
 Rap, R. J. 742
 Rapala, J. 2923, 3134
 Rapaport, R. A. 1568
 Rashad, M. M. 2367, 3378
 Rashid, K. 176
 Raskin, I. 3220, 3228, 3668
 Raskin, L. 2703
 Rasmussen, H. 1288
 Rasmussen, O. F. 852
 Rasmussen, S. R. 39
 Ratanakhanokchai, K. 608
 Raterman, K. 3838
 Rathgeber, B. M. 2988
 Rati, E. R. 910
 Ratledge, C. 2809
 Ratomahenina, R. 1010
 Ratsak, C. H. 1307
 Rättö, M. 533, 538
 Raunkjær, K. 1445
 Rausch, U. 313
 Raval, G. 2718
 Raveh, A. 727
 Ravera, G. 2061
 Ravid, U. 1977
 Rawlings, M. 2708
 Ray, B. 799, 886, 956
 Ray, R. M. 3804
 Ray, S. 1577, 2594
 Raymong, N. 495
 Razem, D. 842
 Rea, M. 170
 Rea, N. 1344
 Real, F. J. 1184
 Reasoner, D. J. 2181, 2720, 3899
 Rebagliati, B. 2061
 Rebhun, M. 1642, 1692, 3770
 Reddy, C. A. 2763, 3466, 3598, 3630, 3633, 3885
 Reddy, K. R. 3336
 Reddy, M. P. 1156, 1291
 Reddy, N. R. 947, 1951
 Reddy, T. K. R. 923
 Redu Pathak 2671
 Reece, L. P. 3780
 Reece, Z. D. 355
 Reed, G. H. 248, 841, 846, 1108, 2817
 Reed, S. C. 1365, 1371, 2794
 Rees, G. N. 2713
 Reeves, R. D. 3672
 Regan, J. M. 3729
 Regan, K. M. 1590
 Reger, J. D. 1941
 Reguera, B. 2218
 Regueros, C. 3844
 Regutti, R. R. 1054
 Rehm, H. J. 2416, 2432, 2458, 3417-3418
 Rehn, Y. 3164
 Reichert, P. 1493
 Reid, I. D. 3520, 3778
 Reij, M. W. 3251
 Reijnders, W. N. M. 1796
 Reilly, W. J. 1873
 Reimer, K. J. 1492
 Reina, L. D. 2952
 Reineke, W. 499, 1505, 3460
 Reinhard, M. 3542
 Reinhold, F. 3057
 Reins, M. 1322
 Reinsel, M. A. 197
 Reiser, J. 3132
 Reiss, J. 2361
 Rejai, B. 1477
 Rekhif, N. 261, 2172-2173
 Rekswinkel, E. 1631
 Renard, P. 3536
 Renganathan, V. 736, 2759
 Renkow, M. 2293
 Rensbergen, J. van 1649
 Rensink, J. H. 3750
 Renwick, A. 2805
 Renwick, S. 153, 2989
 Renwick, S. A. 911, 1006
 Reshetnikova, I. A. 3516-3517
 Resnick, S. M. 3507
 Restaino, L. 1054, 1090
 Reuss, M. 638
 Revel, G. de 93
 Revis, N. 1584
 Reyes, A. 85
 Reyes, J. C. 3867
 Reygrobellet, J. L. 1167
 Reysenbach, A. L. 3851
 Rhallabi, N. 416
 Rhee, G. Y. 1534, 2463
 Rhee, S. K. 1824
 Rhew, R. D. 2696
 Rho, D. 1557
 Rhoads, T. L. 3535
 Rhodehamel, E. J. 2008
 Rhodes, M. W. 276
 Rhykerd, R. L. 3233
 Rhys-Williams, W. 2435
 Ribba, J. P. 931
 Ribas, F. 28
 Ricardo Rodríguez, H. 970
 Ricca, D. 3563
 Ricca, E. 3085
 Rice, E. W. 2161, 2720, 3195, 3899
 Rice, J. D. 3397
 Rice, L. E. 3449
 Rice, L. G. 895
 Rich, M. D. 3061
 Richard, J. 1089, 2089
 Richard, J. L. 175
 Richard-Molard, D. 1975
 Richards, B. K. 486, 3574
 Richards, R. M. E. 2162
 Richardson, K. J. 2868-2869
 Richardson, N. P. 2878, 3123
 Richardson, T. L. 1166
 Riches, M. 1916
 Ricke, S. C. 991
 Rieble, S. 508
 Riedel, K. H. J. 432
 Riet, K. van't 1809
 Rietschel, E. T. 892
 Rifai, H. S. 3226
 Riggie, D. 361, 1235, 1252, 2270, 2292
 Rijn, J. van 3714, 3805
 Rijs, G. B. J. 3750
 Rimkus, K. 523
 Rindel, K. 1606
 Ringelberg, D. 2740
 Ringelberg, D. B. 3183
 Rintala, J. A. 735, 763, 1774, 2344, 2555
 Ríos-Leal, E. 2368
 Rioux, D. 2099
 Rippey, S. 3064
 Rippey, S. R. 3170
 Rishi Shanker 2778
 Ritter, W. F. 2260
 Rittmann, B. E. 1175, 1188, 2395, 2442, 2444, 2512, 2703, 3729
 Rivard, C. 3602
 Rivas, L. 752
 Rivera, I. G. 2024
 Rivera, M. D. 1528, 3596
 Rivers, D. B. 2420
 Rives, D. V. 2077
 Rizzetto, R. 2061
 Ro, K. S. 446, 566, 1555, 2648-2649
 Roach, P. D. 2841
 Robel, R. 438
 Roberson, D. S. 1453
 Robert, J. 2812
 Roberto, I. C. 2474
 Roberts, I. S. 3124
 Roberts, J. 1346
 Roberts, K. 3602
 Roberts, R. 2949
 Roberts, R. D. 623
 Roberts, R. F. 3080
 Roberts, R. G. 105, 107
 Roberts, S. 2419
 Roberts, S. J. 1562, 1565
 Roberts, T. A. 1921, 3126
 Robertson, D. C. 2915
 Robertson, J. 2366
 Robertson, J. M. 2678
 Robertson, L. J. 2239, 2825, 3077
 Robertson, P. 2833
 Robertson, W. J. 3148
 Robins, M. M. 1880-1881
 Robinson, A. B. 380
 Robinson, J. A. 1071
 Robinson, J. J. 354
 Robinson, J. S. 2855
 Robinson, M. S. 1313
 Robinson, R. K. 2189
 Robinson, T. P. 94
 Robles-Cabrera, A. 2372
 Rocchegiani, E. 2964
 Rocelle S. Clavero, M. 87
 Roch, F. 3401
 Roche, K. F. 3767
 Roche, N. 1296
 Rochkova, Z. 2381
 Rocío Estrella, M. 3623
 Rock, S. 3195
 Rodda, N. 2892, 3071
 Rodelas, B. 2380
 Rodgers, F. G. 1075
 Rodrigues, P. C. C. 3337
 Rodríguez, A. 1467
 Rodríguez, H. R. 970
 Rodríguez, H. R. 2042
 Rodríguez, M. 188
 Rodríguez, M. J. M. 693
 Rodríguez, N. 3185
 Rodriguez, V. 2219
 Rodríguez-Eaton, S. 3224
 Rodríguez-Jerez, J. J. 117, 119, 941, 1009
 Rodríguez-Jerez, J. J. 2020
 Rodríguez-Maroto, J. M. 435
 Roe, R. 3299
 Roeckel, M. 1761
 Rogalla, F. 381, 1206, 1276, 1657, 3699
 Rogalski, J. 2748
 Rogers, J. 3034
 Rogers, J. E. 505, 1457
 Rogers, P. 777
 Roh, J. R. 2504
 Rohde, M. 2250
 Roig, M. G. 693
 Roig-Sagués, A. X. 941
 Rojas, J. 2602
 Rojas, M. G. 3345
 Rokem, J. S. 1497
 Rolfs, T. 339
 Rolle, E. 1325
 Roller, S. 987
 Rollins, D. M. 3894
 Rols, J. L. 1650, 3698
 Romalde, J. L. 2958
 Roman, M. G. 1951
 Romanovskaya, T. V. 571
 Rombouts, F. M. 292, 1929, 2837, 3082
 Romem, E. 3341
 Romer, J. 2947
 Romer, T. R. 1959
 Romero, P. 3155
 Romero-Steiner, S. 774
 Romey, W. L. 2107
 Romieu, C. 1455
 Romine, M. F. 3183
 Romli, M. 1219
 Rompré, A. 855
 Ronald, G. W. 2885
 Ronda, S. 2741
 Rondinini, G. 2079
 Ronen, Z. 1431, 2261
 Ronner, A. B. 2693-2694
 Rørvik, L. M. 2954
 Rosa, G. la 3891
 Rosano, D. J. 1111
 Rosario, B. A. del 2007
 Rosario, E. J. del 2756
 Rosario, R. M. 3111
 Rosazza, J. P. N. 3500
 Rose, B. E. 871
 Rose, D. R. 243
 Rose, M. J. 2992
 Rose, P. D. 1586, 3667
 Roseiro, J. C. 462
 Rosén, M. 1282
 Rosenberg, E. 3834
 Rosendorn, R. 321
 Röske, I. 687
 Roslev, P. 3868
 Ross, B. J. 1359
 Ross, C. C. 1669
 Ross, C. M. 1145
 Ross, P. F. 895
 Rosselló-Mora, R. A. 3555
 Rossen, L. 852
 Rossero, A. 2986
 Rossetti, S. 1325
 Rossi, E. 768
 Rossi-Davis, A. 2947
 Rostogi, B. K. 2048
 Rota, C. 89
 Roth, D. 1822
 Roth, J. A. 2334
 Roth, L. A. 1849
 Roth, T. 69
 Rothmund, C. 1213
 Rothschild, N. 3519
 Rottiers, A. 3649
 Roudon, G. 1267
 Roukas, T. 1416
 Rouse, J. D. 2402
 Rousseau, J. D. 476
 Roussos, S. 1402, 2415
 Roussy, J. 1664
 Routh, T. 713
 Routsou, L. B. 3092
 Rovatti, M. 3742
 Rovell, J. M. 1696
 Rowbottom, R. S. 2653-2654
 Rowbury, R. J. 2878, 3123
 Rowe, B. 14
 Rowe, M. T. 821
 Rowe, T. F. 1038
 Roy, B. 3088
 Roy, D. 2648
 Roy, M. K. 932, 2144
 Roy, P. 3547
 Royse, D. J. 3880
 Rozes, N. 1992
 Rozzi, A. 1214, 1389
 Rubino, J. R. 2160
 Ruckenstein, E. 583
 Rud, O. 1133
 Rudd, K. E. 241
 Rudd, L. E. 574
 Rudd, T. 668
 Rüden, H. 1240, 1257
 Ruggeri, B. 1185
 Rugmini Sankaran 2910
 Ruhdal Jensen, P. 3849
 Ruiter, G. A. de 1929
 Ruiz, F. 3639
 Ruiz, Z. 25
 Ruiz Beviá, F. 637
 Rujiwara, R. 2198
 Rulkens, W. 3561
 Rulkens, W. H. 1600, 2687, 3508
 Ruocco, G. 2046
 Rupke, M. 338
 Ruyi, L. 3369
 Rushing, J. W. 2009
 Rusin, P. 3067
 Rusin, P. A. 1576
 Russ, W. 2881
 Russell, A. D. 2147
 Russell, H. H. 1453
 Russell, J. 1350
 Russell, J. B. 3426
 Russell, J. M. 1331, 1367
 Russell, N. J. 3646
 Russell, S. M. 990
 Russell, T. H. 3363
 Russian, J. S. 1974
 Rusten, B. 1173, 1391, 1638, 1725, 2276, 2629
 Rusul, G. 921, 1885, 2920

- Rutter, M. A. 870
 Ryabchenko, L. 1791
 Rychlovský, P. 1575
 Ryder, J. M. 2968
 Ryding, J. M. 1536
 Ryhiner, G. 1263
 Rylander, R. 2308
 Rytov, S. V. 1384, 2709, 3347
 Rytow, S. V. 1377
 Ryu, S. L. 402
 SA Waterbulletin 415, 430, 1030, 1376
 Saastamoinen, T. 2543
 Saavedra, M. 2233
 Sabatini, D. A. 2402
 Saber, S. M. 88
 Sabil, N. 281
 Sabir Nazir 163
 Sacchetti, R. 1102
 Sacco, M. 3085
 Saddler, J. N. 808
 Saeed, A. M. 2990
 Saetti, G. F. 363
 Safferman, S. I. 2251, 2782
 Safi, B. 2644
 Safley, C. 2293
 Saga, C. 174
 Sagberg, P. 2313
 Sage, A. 779
 Sagripanti, J. L. 3092
 Sahai, V. 1198
 Sahid, I. B. 558
 Sahlman, L. 586
 Sai Ram, M. 798
 Saïda, S. 2323
 Saiki, H. 470, 3794
 Saikia, L. 2002
 Saini, H. S. 2388
 Saini, V. S. 2500
 Saint, C. P. 2777
 St. Clair, P. 2385
 Saint-Jean, L. 1398
 Saint-Louis, R. 665
 Sais-Jimenez, C. 2122
 Saitanu, K. 152, 1979
 Saito, M. 3280
 Saito-Taki, T. 1478, 2478, 3531
 Saiz-Jimenez, C. 196, 2119, 2121, 2124
 Sakaguchi, M. 2168, 2953
 Sakai, H. 1919
 Sakai, K. 1698, 2656-2658
 Sakai, M. 1786, 2430
 Sakai, T. 770
 Sakai, Y. 393
 Sakakibara, Y. 676, 1745, 3738
 Sakano, K. 2560
 Sakata, K. 2134
 Sakshaug, E. 272
 Sakurai, Y. 3843
 Sakuma, Y. 2779
 Sakuno, T. 192
 Sakurai, Y. 746
 Sala, N. 1973, 2950
 Salanitro, J. P. 1567, 2579, 3543, 3643
 Saleem, M. 1965
 Saleem, N. 1965
 Salkinoja-Salonen, M. 2542-2543, 3422
 Sallal, A. K. 1884
 Sallée, B. 3760
 Sallis, P. J. 3434
 Salmeron, V. 2380
 Salmon, J. M. 1455
 Salmon, R. L. 59
 Salo, S. 2994
 Salomon, J. C. 1135
 Salonen, K. 1124
 Salt, D. E. 3668
 Saltabaş, Ö. 2588
 Salvadó, H. 1842
 Salvador-Figueroa, M. 1677
 Salvat, G. 2820
 Salyers, A. A. 778
 Salzano, G. 988, 2195, 3084
 Samadpour, M. 60, 2918
 Samah, O. A. 1984
 Samejima, M. 557
 Samelis, J. 983, 987
 Sammut, F. 3258
 Sampedro, L. 3296
 Sampò, S. 3000
 Sampoomam, S. 619
 Sams, C. E. 926, 928
 Samset, O. 272
 Samson, R. 322, 1557, 2644, 3403
 Samson, R. A. 2214
 Samuilov, V. D. 3400
 Sanchez, E. 2148
 Sanchez, E. P. 483, 1759
 Sánchez, F. 3216
 Sanchez, G. 2299
 Sanchez, J. M. 435, 492
 Sanchez, P. S. 2856, 3030
 Sanchez, T. 925
 Sánchez Fraga, G. 39
 Sánchez Hernández, E. P. 1676
 Sánchez-Torres, P. 810
 Sanchis, V. 1973, 2950
 Sand, W. 744
 Sandaa, R. A. 3043
 Sandberg, M. 3350
 Sande, R. van de 741
 Sanden, B. 1816
 Sandhu, D. K. 3376
 Sandhu, K. S. 70
 Sandhya, S. 2673, 2721
 Sangermano, L. R. 2857
 Sangodoyin, A. 2228
 Samin, F. D. 291
 Sanjay Nene 2568
 Sankaran, R. 2993
 Sankey, B. M. 650
 Sanni, A. I. 91
 Sannia, G. 542
 Sano, Y. 1792
 Sanromán, A. 549
 Sans, C. 2692
 Sanseverino, J. 3235, 3577, 3800
 Sansoni, G. 2014
 Santamaris, R. 3882
 Sant'Anna, G. L., Jr. 734, 3261
 Santas, P. 3206
 Santas, R. 3206
 Santoro, A. 2976
 Santos, J. 250
 Santosh 2485
 Santosh Kumar 713
 Sanz, B. 872
 Sanz, J. L. 3185
 Sapkota, D. P. 1336
 Sapru, V. 249
 Sarada, R. 490, 698
 Sarais, I. 2047, 3048
 Sarangbin, S. 467
 Sarapatka, B. 1419
 Saraswat, N. 3878
 Sardegna, R. 2948
 Sarhan, M. M. 706
 Sarig, S. 3277, 3471
 Sarita Sinha 2595
 Sarkar, A. K. 788-789
 Sarkar, P. K. 112
 Sarkar, S. 2081
 Sarli, T. A. 2976
 Sarmiento, R. M. 2827
 Sarn, J. E. 2013
 Saroja, R. K. 713
 Sarojini Kanotra 1464
 Sarrette, B. 2866
 Sartory, D. P. 2896
 Sarwar, M. 633
 Sasaki, K. 2330
 Šašek, V. 553, 602, 1829
 Sasekumar, A. 1014
 Sassi, G. 1185
 Sastry, K. S. 2615
 Satchell, F. B. 1930
 Satherley, J. 3052
 Sathiyamoorthy, P. 793
 Sathyanarayana, D. N. 3795
 Sato, M. 3886
 Sato, M. I. Z. 2856, 3030
 Sato, S. 2474, 2492, 2998, 3381
 Sato, T. 2761
 Sato, Y. 613
 Satoh, H. 1302
 Sattar, S. A. 2160, 3148
 Satyanarayana, T. 809
 Satyanarayana Rao, T. S. 2993
 Saubois, A. 80
 Sauder, B. J. 187
 Saunamäki, R. 1712
 Saunders, F. J. 1637
 Saunders, G. A. 2056
 Savage, S. 675, 2688
 Savell, J. W. 2044
 Savithri, H. S. 2738
 Savoie, J. M. 550, 1243
 Sawai, S. 3381
 Sawant, A. D. 2126, 3023
 Sawant, S. S. 3042
 Sawaya, W. N. 2068, 2074
 Sawayama, S. 1839, 3346
 Sawers, G. 1101
 Sawicka-Żukowska, R. 1827
 Saxena, G. S. 713
 Saxena, R. K. 818, 1591, 2664
 Sayer, M. 2129
 Sayler, G. 2532
 Sayler, G. S. 3235, 3487, 3565, 3577
 Sayles, G. 3240
 Sayles, G. D. 302, 2771, 3273-3274
 Scarborough, R. W. 2260
 Scarborough, S. P. 2263
 Scarlata, V. 1735
 Schade, F. U. 892
 Schade, M. 1303
 Schäfer-Treffenfeldt, W. 638
 Schaffner, D. W. 2085
 Schagemann, G. 238
 Schalch, B. 3050
 Schauer, F. 2413
 Schelle, H. 1758
 Schellen, A. A. J. C. 3702
 Schellhorn, H. E. 3534
 Schellinkhout, A. 2285
 Schepens, P. J. C. 61
 Scherer, S. 47, 1103
 Scherfig, J. 685
 Schets, S. 2226
 Schicho, R. N. 2614
 Schiffrin, D. J. 3052
 Schillinger, U. 2175
 Schindler, P. R. G. 2887
 Schink, B. 521, 2397, 2418, 3485
 Schinner, F. 2598, 3747
 Schirawski, J. 1794
 Schirmer, A. 1443, 3613
 Schirra, C. 581
 Seellegel, H. G. 3613
 Schleifer, K. H. 400, 1155, 2254, 2847
 Schleypen, P. 1370
 Schlochtermeier, A. 2747
 Schlosser, D. 313
 Schlundt, J. 1760
 Schmauder, H. P. 313
 Schmid, A. 2428
 Schmidhalter, D. R. 536-537
 Schmidt, F. 1616
 Schmidt, G. 892
 Schmidt, G. R. 255, 1000, 2974, 3026
 Schmidt, I. 2537, 2633
 Schmidt, J. E. 1383, 3469
 Schmidt, V. 404
 Schmidtberg, G. 3578
 Schmitt, W. 1779
 Schneeberg, E. 1724
 Schneider, B. J. 781
 Schneider, E. 2027, 3193
 Schneider, G. 1963
 Schneider, S. 3578
 Schnitzer, M. 680, 2668
 Schnürer, J. 823
 Schoebel, A. 2439
 Schoenen, D. 208, 3068
 Schofield, S. L. 14
 Schöllhorn, A. 2550
 Scholtz, O. 2479
 Scholz-Muramatsu, H. 2745
 Schomakers-Revaka, U. 1858
 Schönborn, C. 687
 Schoonover, J. 362
 Schopf, E. 51
 Schraa, G. 2268, 3504
 Schreiber, C. L. 947
 Schreier, M. 892
 Schrempe, H. 2747
 Schroder, H. 1644
 Schroeder, E. D. 3304
 Schröter, A. 3607
 Schroeter, I. 1696
 Schukkink, R. 2186
 Schulthess, R. V. 3712
 Schulthess, R. von 3735-3736
 Schultz, F. J. 34, 974
 Schultz, W. W. 509
 Schultze-Lam, S. 1113
 Schumacher, W. 1801
 Schurer, B. 899
 Schuster, C. 404
 Schutte, H. K. 1018, 3009
 Schved, F. 1051
 Schwab, K. J. 2862
 Schwabe, G. 1743
 Schwartz, A. 3470
 Schwartzbrod, J. 2273, 3166, 3193, 3372
 Schwartzbrod, L. 948, 2273, 2864, 2969, 3164
 Schwarz, H. 1423
 Schwarz, L. N. 1361
 Schwarzenbach, R. P. 3558
 Schwieger, B. R. 2619
 Schwisow, J. D. 377
 Sciabarrasi, M. R. 3278
 Scioli, D. 705
 Scolari, G. 3086
 Score, A. J. 213
 Scott, C. D. 2484, 3773
 Scott, J. A. 1656, 3821
 Scott, M. J. 993
 Scott, P. H. 1622
 Scott, T. C. 2484, 2651, 2740, 3773
 Scout, K. M. 386, 3493, 3559
 Scutt, J. E. 2895
 Seagren, E. A. 2512
 Seal, D. V. 1901
 Seal, K. J. 198, 1541
 Seale, K. 1870
 Searles, D. B. 3498
 Sebal, M. 908
 Sebraneck, J. G. 966, 976
 Seddon, B. 1927, 2931, 3810
 Sedory, P. E. 3319
 See, T. S. 1190
 Seefeldt, L. C. 2739
 Seeger, H. 2032
 Seelye, R. J. 2968
 Seenayya, G. 798, 1409, 2682, 3392
 Seep, D. 319
 Segall, L. 1248
 Segar, R. L., Jr. 2616
 Segar, R. L., Jr. 3463
 Seidel, K. 3165
 Seigle-Murandi, F. 3582
 Seigne, C. 512
 Sekar, S. 619
 Sekine, S. 607
 Sekla, L. H. 3896
 Sekoulov, I. 1494
 Selala, M. I. 691
 Selgas, D. 2210
 Selifonov, S. A. 1517, 3685
 Sello, G. 568
 Seltmann, G. 2211
 Selvanathan Subramaniam 952
 Selvaraj, P. T. 3430
 Semmens, M. J. 346
 Semprini, L. 2506, 3207
 Sencio, B. 709
 Sendra, J. M. 2704, 2728
 Seng, S. C. 1945
 Senior, E. 1446, 1739
 Senne, D. A. 1771
 Senthilnathan, P. R. 1156
 Sequi, P. 356
 Serafim, M. B. 1946
 Sermanni, G. G. 464, 2536
 Serpa Pimentel, M. 92
 Serra, J. L. 681
 Servis, N. A. 2787, 3907
 Setlow, B. 3049
 Setlow, P. 3049

- Seux, R. 209
 Sève, M. A. de 2229
 Seviour, E. M. 394, 3693
 Seviour, R. J. 394-395, 1820, 3315, 3693, 3830
 Sevrin-Reyssac, J. 2340, 2686
 Sewell, G. W. 1453
 Seydel, U. 892
 Seyfried, C. F. 1222, 1224
 Seymour, B. S. 1342
 Seymour, I. J. 2975
 Shah, D. 3408
 Shah, F. H. 163
 Shah, K. L. 327
 Shah, M. M. 271
 Shah, N. N. 3223
 Shalaby, S. 2338
 Shallcross, J. A. 43, 849
 Shama, G. 2139, 3124
 Shamsuzzaman, K. 3060
 Shan, Y. G. 2140
 Shankar, A. 818
 Shanker, R. 1159
 Shanley, R. S. 1661
 Shanmugasundaram, S. 793
 Shanmugasundaram, R. 2741
 Shann, J. R. 3627
 Shannon, M. J. R. 3210
 Shantha, T. 910
 Shao, Z. Q. 3619
 Shaotang, W. 3369
 Sharabi, M. E. D. 3495
 Shareck, F. 802
 Shareefdeen, Z. 572
 Sharif, F. A. 2571
 Sharma, D. C. 1571
 Sharma, M. M. 788-789, 1551
 Sharma, P. K. 1388
 Sharma, R. P. 932
 Sharma, S. 1687
 Sharma, V. K. 2711
 Sharp, J. C. M. 1873
 Sharp, S. L. 951
 Sharpe, A. N. 875, 3908
 Shashank Mathur 1412
 Shaw, D. M. 3902
 Shaw, E. D. 1562
 Shaw, J. P. 3552
 Shaw, L. E. 2422
 Shaw, L. J. 3631
 Shaw, S. 878, 1891
 Shaw, S. J. 1968
 Sheehy, A. J. 2713
 Shehata, S. 2338
 Sheintuch, M. 1642
 Sheldom, B. W. 1002, 2152, 3062
 Shelef, G. 417, 477, 1744, 3368, 3765, 3790
 Shelef, L. A. 231, 1954, 2095, 2984
 Shen, H. 3468, 3653, 3828
 Shen, Y. 3895
 Shendye, A. 1806
 Shepherd, M. E. 3035
 Sheppard, D. C. 2688
 Sheridan, J. J. 957-958, 2981-2982
 Sherikar, A. T. 220, 2127
 Sherrod, P. S. 1930, 2870
 Sherwood, R. 1357
 Sheu, C. S. 2535
 Shevchenko, A. M. 718
 Shi, H. C. 3305
 Shi, J. 2527
 Shiaris, M. P. 2510
 Shibata, M. 3317
 Shida, Y. 2030
 Shieh, J. S. 2972
 Shieh, W. K. 2554-2555, 3265
 Shigeno, T. 1413
 Shillam, P. 2947
 Shima, S. 2715
 Shimada, T. 2197-2198
 Shimidzu, N. 221, 2176
 Shimizu, H. 771
 Shimizu, K. 1199
 Shimizu, T. 1232
 Shimp, R. J. 1433
 Shimura, Y. 2563
 Shin, H. S. 3814
 Shin, Y. C. 472
 Shin HangSik 3814
 Shinagawa, E. 3529
 Shinano, H. 115
 Shindala, A. 447
 Shineman, T. L. 1920
 Shingler, D. A. 881
 Shingler, V. 586, 773
 Shinjo, H. 3753
 Shinkai, T. 2865
 Shinke, R. 3901
 Shinoda, T. 443
 Shioji, N. 3886
 Shiota, H. 746, 3843
 Shirasawa, T. 2483
 Shirkot, C. K. 627
 Shirkot, P. 627
 Shivakumar, P. D. 2489
 Shivaraj, D. 2682
 Shivarman, N. 2540
 Shivraj, D. 3392
 Shnitzer, M. 1744
 Shnyrov, V. L. 1832
 Shochat, E. 2507
 Shoda, M. 3781
 Shoham, Y. 3834, 3844
 Sholberg, P. L. 2006
 Shonnard, D. R. 3223
 Shoukr, F. A. 3820
 Shriver-Lake, L. C. 53
 Shtarkman, N. B. 3477
 Shitlman, M. I. 61
 Shubakov, A. A. 2770
 Shukla, G. L. 713
 Shuler, M. L. 645, 3677
 Shumway, S. E. 2959
 Shuruhn, Yu. V. 1561
 Shustova, L. G. 3769
 Shuttleworth, K. L. 2585
 Shuval, H. I. 3340, 3371
 Shyam, M. 1388
 Siaz-Jiménez, C. 3016
 Sibirnyi, A. A. 3380
 Sibony, J. 1183, 1267
 Siddalingu 2002
 Siddiqui, Y. M. 41
 Siddons, C. A. 2846
 Sidoli, C. M. 3672
 Siebeling, R. J. 2177
 Siedersleben, M. 3607
 Siegrist, H. 3636, 3734
 Siemiatycki, J. 2891
 Sierka, R. A. 1705
 Sierra, M. 2055
 Sierra-Alvarez, R. 1714
 Siika-aho, M. 533, 729
 Siitonen, A. 2830
 Sijtsma, L. 300
 Sikes, A. 1111
 Silanikove, N. 1461
 Siljudalen, J. G. 1638
 Silla Santos, M. H. 101, 3109
 Silliker, J. H. 873
 Silva, A. 3313
 Silva, J. L. 121, 866
 Silva, M. C. D. da 2039-2040
 Silva, R. da 805, 1784
 Silva, S. 2768
 Silva, S. A. 414, 2237
 Silva, S. S. da 2474
 Silva-Deronzier, G. D. 419
 Silverstein, J. 1537
 Sim, T. S. 389, 1237
 Simankova, M. V. 2744
 Simard, P. 3227
 Simard, R. E. 3897
 Simizu, K. 3236
 Simmen, A. 129
 Simmons, P. 2599
 Simmons, R. B. 1542, 2126
 Simms, M. K. 1291
 Simon, B. 2569
 Simon, P. 2184
 Simon-Pujol, M. D. 3671
 Simon-Sarkadi, L. 2011
 Šimonovičová, A. 812
 Simons, J. A. 29
 Simonson, J. 2177
 Simpson, B. K. 90, 909, 1922
 Simpson, M. V. 90, 1922
 Simpson, R. 3045
 Simpson, W. J. 1991
 Sinclair, R. 3354
 Siferiz, F. 2783
 Singal, R. 818, 1591
 Singh, A. 534, 1198, 1833, 3515
 Singh, A. P. 184
 Singh, B. 713, 1430
 Singh, B. J. 2174
 Singh, B. R. 53, 942, 2962
 Singh, D. 3387
 Singh, D. K. 887
 Singh, D. P. 2488, 3526
 Singh, H. R. 1014
 Singh, J. 1120
 Singh, L. 2241
 Singh, N. 70-71
 Singh, R. 1762, 3526
 Singh, S. 1120
 Singh, S. P. 2346
 Singhal, S. K. 906
 Singleton, E. 2947
 Singleton, I. 2599
 Sinha, A. K. 63
 Sinha, K. K. 63, 1960
 Sinha, P. 932
 Sinha, R. N. 76, 172, 2094
 Sinha, S. 2589
 Sinigaglia, M. 266, 2886, 3131
 Sinkjær, O. 678, 1284, 1629, 1641
 Sinner, M. 555
 Sinnwell, V. 2413
 Sinton, L. W. 3167
 Sipocz, J. 2690
 Siragusa, G. R. 256, 967, 1040, 2149
 Sirigina, S. 3789
 Siso, I. G. 1479
 Sista, V. R. 2500
 Sivaraj, R. 2485
 Sivonen, K. 2923, 3134
 Six, S. 1794
 Sizoo, E. A. 899
 Sjöberg, A. M. 2994
 Sjögren, E. 2946
 Skalsky, D. S. 1658
 Skarda, S. M. 1357
 Skeen, R. S. 511, 526, 663, 3415
 Skinner, G. E. 947
 Skjerve, E. 2876
 Skory, C. D. 1962
 Skovgaard, N. 17, 2842
 Skudina, I. A. 3806
 Slabyj, B. M. 885
 Sládečková, A. 333
 Slagle, J. 1253
 Slater, J. H. 3432, 3841
 Slavik, M. F. 136, 155, 994, 1005, 1845
 Slepnevkin, A. V. 1517
 Sletholt, E. 3057
 Sleyster, R. 3689
 Slik, S. 2087
 Sloan, E. M. 120
 Slobodkin, A. 785
 Slobodkin, A. I. 3682
 Slot, P. C. 3442
 Sluder, J. L., Jr. 3271
 Sly, L. I. 1062, 2716, 3797
 Smal, A. J. A. C. 3503
 Smalls, I. C. 1348
 Smelt, J. P. P. M. 1883
 Smerage, G. H. 249
 Smillie, M. A. 3095
 Smith, A. 653
 Smith, A. A. 58
 Smith, A. C. 1076, 2192
 Smith, A. D. 868
 Smith, A. J. 380
 Smith, A. T. 3057
 Smith, D. C. 3534
 Smith, D. W. 1077, 2341
 Smith, G. C. 2974, 3026
 Smith, G. M. 364
 Smith, G. S. 1971
 Smith, H. V. 2825, 3077
 Smith, J. 44, 975, 1068
 Smith, J. E. 615
 Smith, J. L. 239
 Smith, J. P. 90, 909, 1922
 Smith, J. S. 969
 Smith, L. 3122
 Smith, L. G. 275
 Smith, P. H. 3396
 Smith, R. L. 1162, 3719
 Smith, R. V. 1129
 Smith, T. J. 3878
 Smith, T. J. N. 2129
 Smith, W. F. 1361
 Smith, W. H. 3395
 Smittle, R. B. 873
 Smolders, G. 3749
 Smolders, G. J. F. 686, 3752
 Smolders, G. S. F. 1659
 Smruti Pushalkar 2757
 Snape, J. R. 2434
 Snowball, M. R. 3077
 Snyder, O. P., Jr. 2092
 Soares, A. C. 1780
 Soares, H. M. 3172
 Sobotka, J. 3070
 Sobotke, B. 744
 Sobsey, M. D. 2862, 3069, 3074, 3135, 3154
 Soccol, C. R. 1406
 Soda, K. 503, 3840
 Soddell, J. A. 394-395, 1820, 3315, 3693, 3830
 Søeberg, H. 682
 Soeberg, H. 1201, 2257
 Soeder, C. J. 775
 Soentoro, P. 2190
 Soffer, T. 922
 Sofos, J. 2947
 Sofos, J. N. 120, 255, 1000, 2974, 3026
 Soh, C. Y. 2596
 Sohwa, S. 719
 Sokol, R. C. 1534, 2463
 Solaro, R. 3279, 3579
 Soljan, V. 1636
 Solomon, H. M. 1951, 2008
 Solow, A. R. 1137
 Solter, K. 1194
 Somayaji, D. 3803
 Somerville, C. C. 3248
 Somkuti, G. A. 2729
 Somlyody, L. 2327
 Sommer, R. 2834, 3072, 3905
 Somporn, W. 880
 Sonesson, A. 1906
 Song, H. 806
 Song, J. J. 472
 Song, S. K. 1197
 Song, Y. F. 2364
 Sonnleitner, B. 3262-3263
 Sonntag, H. G. 3053
 Sonoda, Y. 463, 468, 695, 1226, 2642
 Sonohara, H. 2398
 Sonomoto, K. 2656
 Sorden, C. J. 1744
 Sørensen, A. H. 299
 Sørensen, D. L. 1143
 Sørensen, K. 1263
 Sorkhoh, N. A. 1483, 2502
 Sorlini, C. 203
 Sorojini Kanotra 2496
 Sorokin, D. Y. 3681
 Sorour, M. T. 2327
 Sörqvist, S. 1115
 Sota, H. 772
 Soto, M. 1673, 2319, 2347
 Sotsky, J. B. 559
 Soubes, M. 1381
 Soukharjevski, S. 2112
 Soukup, A. 1364
 Soulié, M. 1167
 Soumet, C. 48
 Sousa, C. P. 2234
 Southam, G. 2672, 3656, 3792
 Souza, V. M. 2934
 Spadaro, J. T. 736
 Spahr, U. 177
 Spain, J. C. 2429, 3248
 Spanedda, L. 2573
 Spanjers, H. 409
 Spanning, R. J. M. van 1796
 Spear, L. 3523
 Specchia, V. 1185

- Specht, W. 1276
 Speedie, M. K. 3456
 Speitel, G. E., Jr. 2616
 Speitel, G. E., Jr. 3463
 Spencer, R. L. 352, 359
 Sperling, M. von 445
 Spivak, I. R. 1497
 Splitstoesser, D. F. 104, 1998
 Spolton, R. L. 449
 Sponholz, W. R. 2999
 Spotti, E. 1983
 Sprey, B. 804
 Springael, D. 2427, 3502
 Springthorpe, V. S. 2160, 3148
 Sproles, G. K. 2048
 Sreekrishnan, T. R. 640, 643, 2600
 Sreenivasulu, C. 1553
 Sridhar, M. K. C. 355
 Sridharan, R. 2485
 Srinivas, D. 2384
 Srinivasan, M. C. 1783
 Srinivasan, R. 2164
 Srinivasan, R. A. 157
 Sringarajan, A. N. 1037
 Srivastava, S. K. 760, 2663
 Srivastava, V. J. 1552
 Srivivasan, D. 1695
 Staarink, T. 7
 Stack, M. E. 1959
 Stackebrandt, E. 3421, 3835
 Stacy, J. R. 3456
 Stafford, T. M. 518
 Stahl, D. A. 2703, 3729
 Stahl, V. 181
 Ståhlberg, J. 552
 Stahr, H. M. 68, 1045
 Stalder, V. 792
 Stalmans, M. 1568, 3649
 Stamford, T. L. M. 2039-2040
 Stamm, J. 1160
 Stamou, A. I. 421
 Stams, A. J. M. 662, 1566, 1803, 2268, 3488, 3504, 3853
 Stanbridge, L. H. 52
 Stanek, G. 2834
 Stanley, S. J. 2341
 Stark, J. M. 1893
 Stark, L. R. 412
 Starke, L. 646
 Starckenburg, W. van 3750
 Starnick, J. 3607
 Starosvetsky, J. 2722
 Starovoytov, I. I. 1517
 Starr, J. L. 611
 Staruszkiewicz, W. F. 939
 States, S. J. 3035
 Statton, K. M. 3123
 Stauffer, F. 279
 Stavropoulos, S. 983
 Stead, D. 2151
 Steber, J. 3402
 Stec, M. G. 2968
 Stecchini, M. L. 293, 2047, 3048
 Steen, J. M. D. van der 3442
 Steen, W. C. 1564
 Steenhuis, T. S. 3626
 Stefan, H. G. 3333
 Steigerwalt, A. G. 1110
 Steiman, R. 3582
 Stein, A. 3731
 Steinbüchel, A. 1443, 2746
 Steiner, E. 1448
 Steiner, W. 548, 555, 2753
 Steinhart, H. 1509
 Steinle, E. 2691
 Steiof, M. 3209
 Steller, J. 2472
 Stengel, C. 1615
 Stenning, R. 3098
 Stensel, H. D. 1653
 Stenström, I. M. 1787
 Stenstrom, M. K. 566, 3319
 Stenström, T. A. 2900
 Stentiford, E. I. 354
 Stephens, P. J. 1932
 Stephenson, R. J. 1721
 Stephenson, T. 346, 440
 Sterjiades, R. 3447
 Sterner, O. 2517
 Stetler, R. E. 19
 Stetler, K. O. 3864
 Stetzenbach, L. D. 3160
 Steuterville, R. 1244, 2292, 2305, 3290, 3815
 Stevens, B. G. 1397
 Stevens, D. K. 3592
 Stevens, S. E., Jr. 412, 1598, 3099
 Stevenson, J. M. 3033
 Steward, C. C. 3594
 Stewart, A. J. 2617
 Stewart, C. S. 455, 2391
 Stewart, P. R. 50
 Stewart, P. S. 2164, 2706, 3866
 Stewart, V. 1795
 Stewien, K. E. 3364
 Stieber, M. 1847
 Stiles, M. E. 141
 Stillmunkes, A. A. 966
 Stiteler, W. 304
 Stiteler, W. M. 2244
 Stivastav, R. K. 1844
 Stockar, U. von 481
 Stockenström, S. 78
 Stockinger, H. 3458, 3641
 Stolbova, K. A. 205-206, 234
 Stoll, A. D. 646
 Stolle, A. 1904, 2772
 Stolle, F. A. 2057
 Stoltenkamp, J. 636
 Stolz, P. 3610
 Stone, B. 350
 Stoner, D. L. 1865, 2675
 Stonsaovapak, S. 880
 Stoodley, P. 1174
 Stoppe, N. C. 2856, 3030
 Stortelder, P. B. M. 3435
 Stott, J. F. D. 1902
 Stout, J. E. 3036
 Stouthamer, A. H. 1283, 1781, 1796
 Straatsma, G. 1242
 Strachan, N. J. C. 2850, 3893
 Strachan, W. 3693
 Štrancar, A. 634
 Strand, O. 1718
 Strand, S. E. 1536
 Straškrabová, V. 1128
 Strasser, H. 2598
 Stratton, G. W. 614, 1523
 Straub, T. M. 1144, 1746, 1780, 3161
 Straub, U. 3068
 Straube, G. 1585
 Straube, W. 3360
 Strauss, N. 2833
 Strazar, M. 1640
 Strehaiano, P. 931, 1963
 Strehler, A. 1709
 Streichsbiel, F. 784
 Strickland, J. 1621
 Strickland, J. E. T. 1264
 Strietelmeier, B. A. 1576
 Stringer, M. F. 247
 Stringer, R. L. 3361
 Stringer, S. C. 2058, 2171
 Stringfellow, W. T. 1209, 1499
 Ströback, S. 3339
 Strohmaier, F. E. 626
 Strom, P. F. 3236
 Strong, G. E. 3178
 Strong-Gunderson, J. M. 3177, 3565
 Stroot, C. A. 2248
 Strotmann, U. J. 1423, 3180
 Strube, R. 689, 1613
 Struijs, J. 636, 3412
 Strydom, J. P. 2646
 Strzelczyk, A. B. 3005
 Stuart, J. B. 1675
 Stubbs, S. 270
 Stuckey, D. C. 2351
 Stucki, G. 1272, 2550, 3617
 Šturdik, E. 2414
 Šturdiková, M. 659
 Stuthridge, T. R. 1700, 1704
 Stutzenberger, F. J. 716
 Stüven, R. 2633
 Su, J. J. 3554
 Su, M. C. 1582
 Suárez, G. 1947
 Subbaraman, S. 194
 Sublette, K. L. 2741, 3430, 3541, 3838
 Subramanian, G. 619, 1468
 Subramanian, T. V. 2667
 Sudgen, C. 1472
 Sudo, R. 456
 Suemori, A. 3847
 Suen, W. C. 2429
 Suett, D. L. 1562
 Sufliata, J. M. 1432, 2402, 2605
 Sugio, T. 3837
 Sugisaki, H. 2231
 Sugita, H. 3012, 3014
 Suh-Ling, Y. 3406
 Suidan, M. T. 302, 676, 1745, 2501, 2695, 2771, 3272-3274
 Surjan Singh 1120
 Sullivan, N. M. 881
 Sultana, K. 2881
 Sümer, E. 3329
 Sumino, T. 1630, 3730
 Summerfield, M. T. 342
 Sumner, S. S. 217, 907
 Sun, B. 401
 Sun, D. 2680
 Sun, T. H. 2364
 Sun, W. Q. 3456
 Sun, Y. 2025, 2029
 Sunairi, M. 1239
 Sund, C. 1628
 Sundaram, N. S. 633
 Sundaram Ramakrishnan 3766
 Sundararajan, A. 3264
 Sundari, R. B. T. 2721
 Sundari, S. S. 2764
 Sundheim, G. 240, 3110
 Suñen, E. 2005
 Sung, S. 2288
 Sunil Khanna 1526
 Sunitha, D. 1409
 Suntornsuk, W. 2157
 Suominen, I. 3683
 Surampalli, R. Y. 334
 Surendran, P. K. 3100
 Suresh, P. V. 1752
 Surmacz-Gorska, J. 2333
 Suschka, J. 590
 Sushama Borgaonkar 484
 Sutherland, A. D. 159, 164
 Sutherland, J. B. 1484
 Sutherland, J. P. 1921, 3103, 3126
 Suttle, C. A. 3152
 Sutton, D. C. 900
 Sutton, P. M. 1182
 Suwa, Y. 1326
 Suwanno, S. 1908, 2359
 Suzuki, C. 2928
 Suzuki, I. 1599, 2611
 Suzuki, K. I. 2715
 Suzuki, M. 1828
 Suzuki, N. 385
 Suzuki, T. 465-466, 1503, 2509
 Svanberg, U. 2946
 Sveum, W. 864
 Svoronos, S. A. 3349
 Swaffield, C. H. 1543
 Swami, B. S. 190
 Swaminathan, B. 1958
 Swaminathan, K. R. 3390
 Swamy, M. V. 798
 Swamy, M. W. 1409
 Swamy, Y. M. I. 81
 Swanson, B. G. 55, 3078
 Swanson, G. B. 874
 Swartzel, K. R. 162
 Swedling, E. O. 1777
 Swelim, M. A. 897
 Swindlehurst, R. J. 3361
 Swindoll, C. M. 3239
 Swings, J. 2117
 Switzenbaum, M. S. 3172
 Sydenham, E. W. 78
 Syers, J. K. 632
 Sykora, V. 1736
 Sylvestre, M. 790
 Sylvestre, S. 2686
 Szabo, E. A. 1853, 2922
 Szakács, G. 3524
 Szarka, L. J. 500, 664
 Szkucik, K. 985
 Szyrkowicz, L. 3744-3745
 Szűcs, G. 2958
 Szymański, J. 3002-3003
 Tabak, H. H. 1514, 2246
 Tabakov, V. 1791
 Tabernero, C. 3882
 Tada, H. 3012, 3014
 Taeger, K. 391
 Tafuri, A. N. 3540
 Tagliapietra, D. 281
 Taguchi, F. 1478, 2478, 3531
 Taguchi, K. 2894
 Taguchi, T. 525
 Taha, S. H. M. 952
 Taidi, B. 743
 Tailleux, R. 2017
 Tait, C. D. 1576
 Tak, R. B. 2070
 Takács, I. 338, 1782, 3256
 Takada, H. 1569
 Takahashi, E. 757
 Takahashi, F. 393
 Takahashi, J. 2998
 Takahashi, K. 2231
 Takahashi, T. 2712
 Takai, M. 3837
 Takakuwa, T. 399
 Takamizawa, K. 466, 3716
 Takano, K. 594
 Takasaki, Y. 2733
 Takeda, T. 3642
 Takenaka, S. 891
 Takeo, M. 2406
 Takeo, Y. 2165
 Takeshima, T. 3730
 Taki, H. 2407
 Takigawa, H. 2398
 Takii, S. 691
 Takikawa, Y. 1141
 Takizawa, M. 3360
 Talarmin, A. 95
 Tall, B. D. 2838
 Tam, N. F. Y. 673, 3809
 Tama, R. 1939
 Tamang, J. P. 112
 Tambo, N. 1232, 2321
 Tammarate, P. 2756
 Tan, G. B. 300
 Tan, K. N. 389, 1237
 Tan, T. C. 1149
 Tanaka, A. 504, 2514
 Tanaka, H. 296, 607, 1281, 3606
 Tanaka, K. 1630, 3478, 3522, 3730
 Tanaka, M. 762
 Tanaka, N. 397
 Tanaka, O. 757
 Tanaka, S. 2398
 Tanaka, T. 613, 2509, 3738
 Tanaka, Y. 891
 Tanamoto, K. 1948
 Tancula, E. 778
 Tandoi, V. 1318
 Tandoi, V. 2511
 Tanemura, K. 695, 1226
 Tang, M. Y. 2004
 Tani, T. 1919
 Tani, Y. 2560
 Tanimoto, Y. 3445
 Tanimura, A. 2198
 Tanisho, S. 717
 Tanner, C. C. 1340, 3763-3764
 Tanner, R. D. 2334
 Tano, T. 3837
 Tantaoui-Elaraki, A. 2940
 Tanticaroen, M. 608, 1404
 Tanyolaç, A. 1805
 Tapan Routh 713
 Tarar, J. L. 82
 Tarasova, N. B. 1594
 Tarcon, G. M. 3073
 Tarditi, M. 2874
 Tardy, B. 3287
 Tardy, N. 3287
 Tarlera, S. 1381
 Tart, P. I. 845, 2918
 Tarre, S. 680, 1742, 1744, 2668, 3790

- Tartakovsky, B. 1642
 Tarutis, W. J. 1354
 Tarwate, B. G. 2127
 Tasaki, M. 652
 Taşcioglu, S. 723
 Tasnim Kausar 176
 Tassou, C. C. 2153
 Tatani, S. R. 57
 Tataro, M. 3551
 Tate, C. R. 1940
 Tatewaki, M. 2330
 Tatini, S. 2190
 Tatini, S. R. 180, 233
 Tatsumi, K. 3587
 Tauk-Tornisielo, S. M. 715
 Tauro, P. 1420
 Tauxe, R. 2013
 Tavares, C. R. G. 3261
 Tay, L. 840, 2212
 Taylor, S. 3013
 Taylor, A. J. 2036
 Taylor, B. F. 2451, 3684
 Taylor, D. W. 3249
 Taylor, F. 3691
 Taylor, H. D. 2237
 Taylor, K. B. 3388
 Taylor, K. E. 584
 Taylor, M. 1913
 Taylor, R. 2855
 Taylor, R. T. 3223
 Taylor, S. C. 2435
 Tchorch, Y. 3146
 Tchorsh, Y. 3367
 Te Giffel, M. C. 2837
 Te Heesen, D. 3362
 Tebbutt, G. M. 132
 Tedesco, L. 3036
 Tedesco, P. 747, 1753
 Teichgräber, B. 3362, 3731
 Teichgräber, B. 2628
 Teixeira, A. A. 249
 Telang, A. J. 311, 3895
 Telliz, G. T. 3768
 Temmes, A. 1713
 Temmink, H. 409, 2329
 Temple, L. 779
 Ten Brink, B. 2781
 Ten Have, P. J. W. 1764, 2687
 Tenbrink, J. 1258
 Tench, H. B. 390
 Tengerdy, R. P. 2690, 3510
 Tenkanen, M. 538
 Tenno, R. 1289, 3327
 Teo, W. K. 2596, 2767
 Tepper, B. E. 3135
 Terayama, K. 2563
 Ternström, A. 1787
 Terplan, G. 36, 123, 2027
 Terzis, E. 1596
 Testin, R. F. 1063, 2009
 Tett, V. A. 3615
 Tittleton, R. P. 951
 Teuber, M. 1944
 Tezuka, K. 762
 Thacker, W. L. 1110
 Thakur, M. S. 544
 Thambirajah, J. J. 3281
 Thamdrup, B. 3692
 Thanaboripat, D. 2939
 Thangaraj, A. 1407
 Thangaraj, M. 1923
 Thatheyus, A. J. 2362
 Thayer, D. W. 222, 1875, 3059
 Thedchanamoorthy, S. 3357
 Thelappurath, R. 964
 Theobald, R. 2942
 Théodore, K. 2384
 Theradimani, M. 2468
 Thevenot, D. R. 2256
 Thibault, C. 218
 Thibault, J. 1327
 Thibault, P. 893
 Thiel, P. G. 78
 Thiel, S. U. 3186
 Thiele, J. H. 437
 Thielen, S. A. 1890
 Thiem, S. M. 1162
 Thierrin, J. 3222
 Thirion, J. 2718
 Thirlwell, J. 59
 Thofern, U. 1366
 Tholozan, J. L. 920, 1995
 Thomas, A. W. 3841
 Thomas, F. 3321
 Thomas, J. E. 3473
 Thomas, J. M. 3557
 Thomas, V. K. 3305
 Thomas, W. 1369
 Thompson, A. R. 605
 Thompson, J. L. 2307
 Thompson, J. M. 1981
 Thompson, L. D. 977, 2038
 Thompson, S. A. 2240, 2688
 Thomsen, H. A. 1285
 Thomsen, J. K. 1181
 Thomspon, L. 509
 Thorn, R. G. 1851
 Thornberg, D. E. 1285, 2620
 Thorndahl, U. 1193
 Thouand, G. 2557
 Thouvenin, B. 1135
 Threlfall, E. J. 14
 Thüer, M. 1272
 Thurm, V. 848
 Thyagaraja, N. 924
 Tibana, A. 1093
 Tibelius, K. H. 642
 Tichý, R. 1600
 Tidswell, E. C. 3423
 Tiedje, J. M. 780, 1162, 2412, 3466, 3494
 Tiehm, A. 1511
 Tien, M. 3001, 3880
 Tietjen, M. 2822
 Tijhuis, L. 1631, 2272, 2279, 2281
 Tilche, A. 1652
 Tillett, H. E. 20
 Timčenko-Kostić, L. 131
 Timell, T. E. 186
 Timmis, K. N. 654, 1162, 1533, 2447, 3425, 3638
 Ting, Y. P. 1297, 2596, 2767, 3650
 Tinker, D. B. 2128
 Tirado, N. 304
 Tisinger, J. L. 3757
 Tiwari, N. P. 878
 Tjerneld, F. 552
 Toalster, R. 3835
 Tobin, J. M. 2599, 3669
 Tobita, S. 3585
 Todd, E. C. D. 878, 1891
 Todorović, M. 40
 Toé, A. 3582
 Toettrup, H. 1206
 Togna, M. T. 2546
 Togo, Y. 2353
 Toit, J. du 165
 Tokiwa, Y. 1450, 3606
 Tokumaru, H. 3862
 Tokunaga, H. 475
 Tokunaga, T. K. 3850
 Toledo, R. T. 1046
 Tomar, M. 3260
 Tomašovičová, O. 289
 Tomei, M. C. 1318, 1389
 Tomioka, N. 3662
 Tomita, N. 1569
 Toole, A. 2205
 Toora, S. 44, 853, 975, 1068
 Top, E. M. 3621
 Topp, E. 610
 Topping, A. W. 3841
 Toprak, H. 1230, 1375
 Toquin, M. T. 2820
 Toranzos, G. A. 2861, 3190
 Torensma, R. 2090, 2774
 Tormo, J. 869, 2210
 Tornari, Q. 1735
 Toro, M. E. 918
 Torok, D. S. 3507
 Torrado, A. 3386
 Torrano, A. D. M. 2234
 Torre, M. A. de la 202
 Torre, M. de la 699, 1768, 2481
 Torrents, A. 1265
 Torres, C. 364
 Torres, J. A. 116
 Torres, M. 1973
 Torres-Vitela, M. R. 2937
 Torres Zarzo, J. 101, 3109
 Torri Tarelli, G. 1064
 Torriani, S. 2001, 3086
 Torrijos, M. 1304
 Tosa, K. 2894
 Tushima, Y. 1424
 Tosin, I. 2064
 Tóth, D. 285
 Tothill, I. E. 198
 Totome, R. G. 1343
 Tøttrup, H. 1618
 Touganidou, D. 2863
 Tournas, V. 96
 Tournais, H. 300
 Toussaint, M. 3442
 Towner, K. J. 1038
 Toye, D. 1273
 Toyoda, T. 296
 Toze, S. 1062
 Tozzi, E. 1085, 2031
 Trampler, J. 3715, 3725, 3832
 Tran, B. 2857
 Tran, N. 147, 2918
 Tran, T. T. 3010
 Trantolo, D. J. 829
 Travieso, L. 483, 752, 1759, 1767-1768
 Traxler, R. W. 96
 Traynor, S. 673
 Trejo-Hernández, M. del R. 2415
 Trejo Hernandez, M. R. 1402
 Tremblay, L. 2726
 Tremblay, R. 2644
 Tresan, R. B. 3694
 Trevors, J. T. 800, 2296, 3410
 Triballeau, S. 3268
 Tributsch, H. 2602
 Trickett, J. 658
 Trigo, C. 1482
 Trincone, A. 3864
 Triscott, M. X. 1951
 Troendle, S. 3361
 Trofimov, V. I. 205-206, 234
 Tronsmo, A. 2707
 Trotter, Y. 878
 Troussellier, M. 294
 Trouve, E. 344
 Troy, M. A. 2548
 Troya, T. de 2148
 Truax, D. D. 447, 1172
 Trucksess, M. W. 1959
 Trudel, J. P. 1696
 Trudgill, P. W. 2544, 3497
 Truffaut, N. 522
 Truong-Meyer, X. M. 931
 Trüper, H. G. 3029
 Trzesicka-Mlynarz, D. 3566
 Tsai, H. C. S. 1845
 Tsai, S. 994
 Tsai, W. Y. J. 896
 Tsai, Y. L. 2857
 Tsang, C. F. 3850
 Tsanis, I. K. 1126
 Tsatsakis, A. 61
 Tschantz, M. F. 3565
 Tschui, M. 1205, 1615
 Tsen, H. Y. 3, 45, 1898, 2193, 2972
 Tseng, R. K. 3856
 Tseng, S. K. 1227
 Tserovska, L. 2408-2409
 Tshisuaka, B. 560
 Tso-Lin, C. 3406
 Tsomides, H. J. 3557
 Tsubokura, M. 1910
 Tsuchida, T. 1666
 Tsuda, A. 2231
 Tsukamoto, T. 3886
 Tsumura, K. 2330
 Tsuyumu, S. 1141
 Tuinstra, L. G. M. T. 899
 Tulkki, A. I. 1029
 Tunay, O. 1559
 Tunçay, M. 2583
 Tuohy, M. G. 1837
 Tuovinen, O. H. 3686, 3688, 3858
 Turan, M. 1186
 Turner, J. E. 2662
 Turquet, J. 2022
 Tyagi, R. D. 640, 643, 661, 2600
 Tyler, P. S. 2932
 Tyndall, R. L. 2617
 Tyrrell, S. A. 3170
 Tzeferis, P. G. 1418
 Tzianabos, A. O. 1075
 Uba, B. N. 2577
 Ubay, G. 1717
 Uberoi, V. 2737, 3271, 3661
 Ubukata, Y. 691
 Uchiyama, H. 564, 3444, 3662
 Uddin, N. 282
 Udhayakumar, M. 190
 Ueda, M. 2514
 Ueda, Y. 933
 Uemoto, H. 795
 Uemura, S. 431, 556, 1788, 2730
 Ueno, Y. 174, 2492
 Uetake, H. 2225
 Ugborogho, T. O. 1039
 Ugur, M. 126
 UK, British Standards Institution 1-2
 UK, Ministry of Agriculture, Fisheries and Food 826
 UK, Public Health Laboratory Service 2802
 Ulevicius, V. 3246
 Ulitzur, S. 3198
 Ulloa, M. 3129
 Ulmer, A. J. 892
 Ulonska, A. 3616
 Uluatam, S. S. 2282
 Uma, L. 1468
 Umamaheswari, A. 1553
 Umar, M. 816
 Undeland, P. C. 2907
 Unden, G. 1794
 United Nations Environment Programme 3913
 Unklesbay, N. 3046
 Unnikrishnan, K. R. 81
 Unno, H. 3632
 Unterman, R. 3210
 Untermann, F. 2821
 Unz, R. F. 1354, 2585
 Uotila, J. S. 2543
 Uozumi, N. 772
 Upadhyay, N. M. 2610
 Upadhyay, R. K. 1923
 Uplaksh, V. K. 2082
 Upsdell, M. P. 3763-3764
 Upton, J. 675, 1621, 3703, 3727
 Urabe, I. 3608-3609
 Urano, K. 278, 1281, 1666, 3451-3452
 Urata, K. 1823
 Urbain, V. 344, 3321, 3723
 Urbanc-Bercic, O. 1363
 Urdaci, M. C. 1107
 Uria-Nickelsen, M. R. 651
 Url, B. 177
 Urrutia, B. H. 1761
 Urrutia, M. M. 3660
 Urushigawa, Y. 613, 1326
 Urzi, C. 2120
 Urzi, C. 3015
 USA, American Society for Testing and Materials 3197
 USA, Department of Agriculture 10
 USA, Environmental Protection Agency 326
 USA, National Advisory Committee on Microbiological Criteria for Foods 3101-3102
 Usami, S. 467
 Usleber, E. 123, 2027, 2926
 Usui, S. 2030
 Uttapap, D. 608
 Utzinger, D. 2097, 2828
 Uyttendaele, M. 1034, 2186
 Uzgiris, E. E. 3599
 Vachon, A. 2312
 Vagnoli, P. 3128
 Vähätalo, A. 1124
 Vaidyanathan, C. S. 618, 2448, 2738
 Vail, R. 212

- Vaillancourt, J. P. 153, 2989
Vainshtein, M. B. 2609
Valdés, E. 720, 2647
Valdés Méndez, W. 1422
Valenti, P. 3569
Valentine, G. E., Jr. 1669
Valentine, N. B. 3415
Valkeajärvi, A. 533
Vallin, C. 1050
Vallini, G. 3279, 3579
Valocchi, A. J. 2442, 2512
Van Andel, J. G. 3508
Van Beelen, P. 277
Van Bentem, A. G. N. 1776
Van Breeman, A. N. 3788
Van Cleemput, O. 2295
Van Cuyck-Gondre, H. 948
Van Daele, M. 407, 3323-3324
Van de Berg, M. 1942
Van de Sande, R. 741
Van den Berg, R. 3412
Van den Heuvel, J. C. 2350
Van der Kaa, C. 3689
Van der Klift, D. W. 3019
Van der Kooij, D. 3019
Van der Kuij, R. J. 1776
Van der Lelie, D. 3827
Van der Maarel, M. 2428
Van der Mei, H. C. 1018, 3009
Van der Meij, J. 686, 3752
Van der Merwe, M. 697
Van der Ploeg, J. 3842
Van der Steen, J. M. D. 3442
Van der Veer, B. 3105
Van der Vossen, J. M. B. M. 2781
Van der Waarde, J. J. 1437
Van der Zee, F. 662
Van der Zee, M. 300
Van Dijken, J. P. 2732
Van Egmond, H. P. 899
Van Gemen, B. 2186
Van Ginkel, J. T. 1242
Van Ginneken, I. 1854
Van Griensven, L. J. L. D. 1242
Van Groenestijn, J. W. 3267
Van Haelst, A. G. 3472
Van Holle, P. M. 749, 2674
Van Houten, R. T. 2603
Van Klingeren, B. 1057
Van Langenhove, H. 2516
Van Langerak, A. 1566
Van Lier, J. B. 3488
Van Lier, J. J. C. 1242
Van Lith, L. A. J. T. 259
Van Loosdrecht, M. C. M. 686, 1631, 1659, 2272, 2279, 2281, 3326, 3752
Van Netten, P. 1056, 1059
Van Olphen, M. 2902
Van Oostrom, A. J. 1331, 1367
Van Rensbergen, J. 1649
Van Rijn, J. 3714
Van Rijn, J. 3805
Van Spanning, R. J. M. 1796
Van Starkenburg, W. 3750
Van Verseveld, H. S. 1781
Van Verseveld, H. W. 1283, 1307
Van Vlaardingen, P. L. A. 277
Van Vuurde, J. W. L. 927
Van Zyl, C. 2754
Vanbrabant, J. 2848
Vancanneyt, M. 1911, 2848
Vance, I. 726, 1689
Vandecasteele, J. P. 2523
Vandenabeele, J. 741
Vandepitte, V. 1558, 2411
Vandepopuliere, J. M. 2301
Vanderberg, L. A. 1518, 2719
Vanderleyden, J. 3620
Vanosdell, D. W. 3025
Vanrolleghem, P. 407, 683, 1146, 2329, 2333
Vanrolleghem, P. A. 3323-3324
Van't Oever, E. 3702
Varadaraj, M. C. 229, 2921
Vardund, T. 2876
Varela, A. R. 1422
Varela, H. 1410
Vargas-Albores, F. 2844
Varma, A. K. 3527
Vartiainen, T. 1749
Vasconcellos, F. J. M. de 1895
Vasconcelos, J. A. P. 3113
Vasdev, K. 1593, 2664
Vasiliev, V. B. 1377, 1384, 2709, 3347
Vasin, V. B. 205-206, 234
Vass, A. A. 2617
Vassilev, N. 2480
Vassileva, M. 2480
Vasudevan, P. 1462, 1844
Vaughan, E. E. 232
Vavilin, V. A. 1377, 1384, 2709, 3347
Vaxelaire, J. 1296
Vaya, J. 3624
Vayenas, D. V. 1750
Vázquez, B. 637, 3639
Vazquez, F. 918
Vazquez-Duhalt, R. 2455
Veal, D. A. 3424
Vecchioli, G. I. 2267
Vedry, B. 1261
Veenendaal, H. R. 3019
Veer, B. van der 3105
Veeramani, H. 639, 1602
Vega, J. M. 2630
Veiga, M. C. 2317
Věková, J. 2574
Veld, J. H. in't 1056
Veld, P. H. in't 1942
Venekamp, J. C. 2495
Venkateswaran, K. 3545
Venkateswarlu, K. 1553
Venkobachar, C. 2601, 3654
Vennemann, I. H. 2021
Venosa, A. D. 2501
Ventullo, R. M. 1433
Venugopal, R. J. 965
Venugopal, V. 1887
Verachtert, H. 655, 1271, 3301
Vergote, H. L. 749, 2674
Verhoce, J. 2090
Verhoef, J. 2774
Verkerke, G. J. 1018, 3009
Verma, S. C. 2421
Verma, S. S. 2066, 2909
Vernice, M. 2874
Verran, J. 1902, 2855
Verseveld, H. S. van 1781
Verseveld, H. W. van 1283, 1307
Versloot, P. 3157
Versteeg, P. 348
Verstraete, W. 669, 683, 741, 785, 1146, 1214, 1558, 2300, 2329, 2333, 2411, 2516, 2742, 2848, 3331
Verstraete, W. H. 1196, 2674
Vescovo, M. 3086
Vesey, G. 1110
Vesilind, P. A. 291
Vicente, A. de 3155
Vicini, E. 102
Vicini, L. 1983
Vickery, A. P. 2015
Vidal, A. 1206
Videla, H. A. 1868, 2804
Vidon, D. J. M. 908
Viera, M. R. 1868
Vieytes, M. R. 943
Vigon, B. W. 3318
Viikari, L. 533, 535, 538, 729
Vijay Kumar 2094
Viladrich, R. 1973
Vilaginès, P. 2866
Vilaginès, R. 2866
Vilaro, P. 1973
Vilchez, C. 2630
Vilker, V. L. 1489
Villa, P. 2647
Villadsen, J. 1808
Villani, F. 988, 3084
Villar, E. 1832
Villemin, G. 2443, 3321
Villeneuve, J. P. 661
Viñas, I. 1973, 2950
Viñas, M. 1671, 3774
Vincent, G. 1337
Vincent, J. C. 3370
Vincent, P. J. 2129
Vincelas-Akpa, M. 378
Vinciguerra, V. 2536
Vincken, J. P. 2951
Viniegra González, G. 2415
Viotti, P. 1633
Vipan 1474, 1833
Vipulanandan, C. 2377, 3580
Viraraghavan, T. 328, 708
Visca, C. 587
Visconti, A. 174, 904
Visentin, W. 3761
Vishwanathan, L. 713
Visscher, P. T. 3448, 3684
Visser, A. 662
Visser, G. 7
Visser, M. J. C. 2090
Visser, P. M. 3105
Visvanathan, C. 3306
Vitale, N. S. 464
Vitolo, M. 2474
Vivar, C. 862, 1909
Viviani, R. 2014, 2791
Vivier, D. 1010
Vizcarra, A. T. 372, 2309
Vlaardingen, P. L. A. van 277
Vlaemynck, G. 169
Vled, P. H. in 't 3906
Vodopivec, R. 1640
Voeykova, T. 1791
Vogel, C. M. 3240
Vogel, R. F. 3610
Vogel, T. M. 2529
Vogelpohl, A. 1195
Vogler, B. 2582
Vogtmann, H. 357
Voice, T. C. 2527
Voigt, W. 2211
Voigtlander, G. 1192
Volbehr, P. 3196
Volc, J. 553, 1829, 3525
Volchatova, I. V. 571
Volesky, B. 1574, 2590, 2592, 3665
Volkering, F. 573, 3508
Völkl, P. 3864
Vollenweider, R. A. 2791
Volterra, L. 235, 1131, 1874, 3133, 3156
Von Holy, A. 46, 58, 143-144, 215, 267, 981, 1003, 2021, 2063, 2970
Von Pritzbuere, E. 22
Von Schirnding, Y. E. R. 2833
Von Schulthess, R. 3735-3736
Von Sperling, M. 445
Von Stockar, U. 481
Von Zumbusch, P. 1223
Vonshak, A. 1404
Voordouw, G. 311, 3895
Voragen, A. G. J. 2495, 2951
Vorster, S. M. 863
Vos, D. de 655
Vos, P. de 1558, 2848
Vos, W. M. de 253
Vosáhlo, J. 2574
Voss, H. 410
Vossen, J. M. B. M. van der 1061, 2781
Vozárová, K. 2414
Vredenburg, L. H. J. 2350
Vriens, L. 1271
Vries, M. de 927
Vrijland, S. 3307
Vroblesky, D. A. 563
Vuurde, J. W. L. van 927
Vyas, B. R. M. 553, 602, 1829
Vyhálek, V. 1128
Vyškovský, M. 2608
Waarde, J. J. van der 1437
Wada, S. 3587
Wadell, G. 3188
Wadowsky, R. M. 3035
Wadström, T. 2183
Waggy, G. T. 1151
Wagh, A. B. 3042
Wagner, F. 479, 1792
Wagner, H. 69
Wagner, M. 400, 405, 1155, 2254
Wagner-Döbler, I. 3199
Wagstaffe, P. J. 899
Wahaab, R. A. 2338
Wahem, I. A. 98
Wahlung, T. M. 782
Wainwright, M. 1554, 3721
Wait, R. 1110
Waite, T. D. 733
Waites, W. M. 901, 963, 971, 1981, 2058, 2171, 3049
Wakao, N. 746, 3843
Wakatsuki, T. 3819
Wakeling, R. N. 184
Walch, M. 2838
Waldroup, A. L. 2988
Walia, S. 3484
Walia, S. K. 796
Walker, A. 1565
Walker, A. S. 1907
Walker, B. 1120
Walker, J. 2308
Walker, J. T. 155, 1005, 1906
Walker, N. 1913
Walker, T. 1826
Walker, T. R. 3443
Wall, A. J. 614, 1523
Wall, D. K. 2365
Wallace, P. M. 1361
Waller, D. H. 387
Wallis, F. M. 1663
Wallis, M. 2878
Wallis, P. M. 2841
Wallis, I. 2849
Wallsten, T. S. 1897
Wally, M. C. 2182
Walsh, J. L. 1669
Walter, K. S. 857, 1857
Walter, T. 2564
Walters, D. M. 936
Walters, M. 2919
Walther, I. S. 3132
Walz, S. L. 509
Wan, J. 3850
Wan, P. 2419
Wang, C. H. 145, 3068
Wang, C. I. N. 1941
Wang, D. 1477
Wang, D. M. 1372
Wang, D. S. 174
Wang, G. H. 130
Wang, H. 155
Wang, H. H. 358
Wang, J. H. 2624
Wang, K. X. 2701
Wang, L. H. 3252
Wang, L. P. 2140
Wang, L. S. 1451
Wang, M. 2407
Wang, P. 1707, 2749
Wang, Q. 2101
Wang, R. F. 815
Wang, S. 3580
Wang, S. H. 1279, 3414
Wang, S. J. 2972
Wang, T. 733
Wang, X. 1425, 3465
Wang, X. B. 583
Wang, X. H. 401
Wang, X. P. 3237
Wang, Y. 532, 2708, 3549, 3798
Wang, Y. S. 2245
Wang, Y. T. 3468, 3653, 3828
Wang, Y. W. 532, 539
Wang, Z. 1380
Wang, Z. 2697
Wang, Z. 2698-2699, 2701, 3817-3818
Wanner, J. 1311, 1324
Wanner, O. 1200, 1493
Warburton, D. W. 878, 917, 1891, 1934
Ward, C. 3385
Ward, C. H. 3557
Ward, D. J. 2729
Ward, J. 1969
Ward, L. R. 14
Ward, O. P. 3486, 3566
Wardell, L. J. 3229
Wardell, M. R. 374
Wareham, D. G. 1378
Wareing, P. W. 1976

- Warhurst, A. M. 570, 2515
 Warriar, S. B. 1887
 Wasenius, C. O. 1716
 Watabe, K. 2030
 Watabe, S. 1141
 Watanabe, I. 762, 3499
 Watanabe, M. 1141
 Watanabe, M. E. 756
 Watanabe, N. 2134
 Watanabe, T. 607, 3738
 Watanabe, Y. 1393-1394, 2358
 Wate, S. R. 2379
 Watier, D. 1993
 Watkins, W. D. 3170
 Watson, B. 338
 Watson, D. C. 808
 Watson, H. M. 1439
 Watson, R. S. 1266
 Watson-Craik, I. A. 615
 Watters, S. K. 263
 Watts, R. J. 3089, 3318
 Way, J. S. 2776
 Wazny, J. 3002-3003
 Weagant, S. D. 913, 1933
 Weaver, R. W. 3233
 Webb, C. 2604, 2606-2607
 Webb, L. E. 775
 Weber, A. S. 1810, 2575
 Weber, J. 3196
 Weber, J. T. 2013
 Webster, N. J. 3057
 Webster, T. 2499
 Weckhuysen, B. 1271
 Wederquist, H. J. 255, 1000
 Wedi, D. 1308
 Wehrheim, B. 1587
 Wei, C. I. 3099
 Weightman, A. J. 3841
 Weijers, C. A. G. M. 2522
 Weiland, P. 1759
 Weinbauer, M. G. 3090
 Weinberg, Z. G. 2689, 3811
 Weir, D. 3172
 Weir, S. 800
 Weiske, A. 3329
 Weisleder, D. 3831
 Weiss, C. M. 1966
 Weiss, H. 32
 Weiss, J. S. 1024
 Weisslowicz, H. 1051
 Weissman, J. C. 2679
 Weissmann, S. 1520
 Wekell, M. M. 940
 Welander, T. 728, 1282, 1654, 1709-1710, 1715, 1787, 3733
 Welch, S. J. 1565
 Welcz, S. 3196
 Weltevrede, R. 3326
 Weltin, D. 3316
 Wen, X. G. 1373
 Wen-Hsing, L. 3406
 Wendakoon, C. N. 2168, 2953
 Wenerick, W. R. 412
 Wenhua, H. 2549
 Wenning, M. 2247
 Wentz, B. A. 2880
 Wentzel, M. C. 1312, 1323, 2258
 Wentzien, S. 744
 Werner, P. 1847, 2905
 Werner, T. 1608
 Wessberg, J. 1710
 Wester, A. 3241
 Westergaard, J. 207
 Westlake, D. W. S. 2455, 3895
 Westlake, K. 3509
 Westrum, T. 1173, 1725
 Wetteren, M. 1587
 Wever, H. de 655
 Wevers, M. 1649
 Wey, T. T. 547
 Weytjens, D. 1854
 Wheatley, A. D. 2314-2315
 Wheeler, B. D. 878
 Whelan, S. M. 1957
 Whitaker, J. 3328
 Whitaker, R. 2881
 Whitby, G. E. 3075
 White, C. H. 2015
 White, D. C. 1689, 1906, 3183, 3398
 White, E. M. 2441
 White, G. C. 1348
 White, G. F. 2434, 3637, 3646
 White, T. D. 866
 White, T. E. 486
 Whitehead, A. 1886, 2071
 Whitfield, S. 1111
 Whitham, T. S. 3028
 Whiting, R. C. 239, 242, 980, 1104, 2170, 2991
 Whitley, G. 2841
 Whitman, B. E. 3461
 Whitmore, T. N. 2239
 Whitney, P. J. 1543
 Whittam, T. S. 2918
 Wiącek-Zychlińska, A. 1827
 Wiart, J. 3166
 Wichert, B. 438
 Widanapathirana, S. 1204
 Widdecke, H. 606, 2564
 Widdel, F. 2508, 2513
 Widders, P. R. 2050
 Widenmann, A. 3068
 Widjojoatmodjo, M. N. 2774
 Widmann, W. 1293
 Widmer, W. W. 2944
 Widstrom, N. W. 1974
 Wiebe, C. 3567
 Wiedmann, M. 30, 1904, 2772, 2881
 Wiegel, J. 1811, 2736
 Wierenga, P. J. 3623
 Wierinck, I. 1558
 Wiesmann, U. 1643, 2524, 3440
 Wijdieks, A. M. S. 2279
 Wijesinghe, A. M. 3223
 Wijffels, R. H. 3715, 3832
 Wijngaard, A. J. van den 3503
 Wijngaarde, R. 3561
 Wilberg, E. 3836
 Wilcox, D. N. 2832
 Wilcox, G. 1385
 Wilcox, S. J. 3184
 Wild, D. 3735-3736
 Wild, S. R. 668
 Wilde, E. W. 2679
 Wilderer, P. A. 1213, 1308, 1728, 1736, 2283, 2446, 2553
 Wilkes, H. 2413, 3455
 Wilkie, A. C. 3396
 Wilkins, A. L. 1700
 Wilkins, E. 2159
 Wilkins, K. 1153
 Wilkins, L. A. 2651
 Wilkins, L. D. A. 2651
 Wilkins, R. M. 3117
 Wilkinson, J. 1127
 Wilkinson, R. E. 66
 Wilks, C. R. 2062
 Willeke, K. 2852, 3246
 Willers, H. C. 1764
 Willetts, A. 2419
 Willetts, A. J. 3615
 Willey, A. R. 3762
 Williams, A. C. 1049
 Williams, A. J. 1484
 Williams, C. 394, 1820
 Williams, F. D. 1043-1045
 Williams, F. M. 412
 Williams, F. P. 19
 Williams, H. N. 2838
 Williams, J. B. 1333
 Williams, M. P. 3543
 Williams, P. A. 2422, 2435, 2717
 Williams, R. J. 1364
 Williams, S. 670
 Williams, S. E. 968
 Williamson, K. J. 2456
 Willinger, B. 49
 Willis, J. C. 2420
 Willshaw, G. A. 59
 Willson, R. C. 2377
 Wilson, A. W. 670
 Wilson, C. A. 1460, 3884
 Wilson, D. B. 3879
 Wilson, J. T. 2506
 Wilson, L. 3201
 Wilson, L. A. 3023
 Wilson, M. 527, 567
 Wilson, R. A. 2918
 Wilson, R. L. 2992
 Wilson-Kalashita, G. 2938
 Wiltshire, R. J. 3186
 Wimpenny, J. W. T. 94
 Windsor, G. T. 449
 Wingender, J. 3029
 Winkler, H. K. 1293
 Winkler, J. 2250
 Winkowski, K. 1060
 Winter, B. 3777
 Winter, J. 471, 588, 1504
 Wintermeyer, E. 13
 Winther-Nielsen, M. 1629
 Wirtanen, G. 17, 1023, 2994
 Wise, D. L. 829
 Wise, W. R. 1487
 Wiselogle, A. 1477
 Wiseman, J. T. 317
 Wisniewski, H. L. 3543
 Witt, A. R. 2334
 Wittich, R. M. 2413, 3425, 3455
 Wittig, J. T. 1361
 Wittmann, C. 1521
 Wittrup, L. 438, 3353
 Wlassics, I. 3761
 Wohlfarth, G. 1799, 2454
 Wolf, J. de 3442
 Wolfaardt, G. M. 623
 Wolfe, G. V. 1527
 Wolfram, J. H. 1601, 2441
 Wolfson, L. M. 217
 Wollenzien, U. 2120
 Woloshuk, C. P. 2858, 2929
 Wong, A. C. L. 2109
 Wong, A. D. 321
 Wong, B. 2955
 Wong, H. C. 1097, 2018
 Wong, J. W. C. 2302
 Wong, K. K. 241
 Wong, K. K. Y. 808
 Wong, M. H. 2302
 Wong, R. 2220
 Wong, R. M. 241
 Wong-Leung, Y. L. 2360
 Woo, K. D. 1769
 Wood, B. 1843
 Wood, B. D. 2700
 Wood, G. 899, 2218
 Wood, M. 324
 Wood, T. K. 3446
 Wood, T. M. 1460, 1790, 3884
 Woodams, E. E. 3384
 Woodard, S. E. 1683
 Woodley, C. M. 2958
 Woodley, J. M. 1411
 Woods, D. R. 1866
 Woods, P. H. 1359
 Woodward, F. I. 834
 Woolard, C. R. 1694, 2278
 Woolcock, J. B. 1879
 Worfel, R. C. 3026
 Worobec, S. 1891
 Wouda, T. W. M. 1315
 Wouters-Wasiak, K. 617
 Wray, V. 3638
 Wrenn, B. A. 2501
 Wrenn, S. 316
 Wright, C. A. 688
 Wright, D. J. 2846
 Wright, K. M. 23
 Wright, M. A. 3691
 Wu, J. 632, 2348
 Wu, J. S. 3720
 Wu, Q. 679
 Wu, Q. T. 3728
 Wu, S. 243
 Wu, S. C. 2460
 Wu, W. M. 437, 3600
 Wu, Z. B. 1372, 1838
 Wu QiTu 3728
 Wuenschel, M. 12
 Wuertz, S. 3563
 Wuest, P. J. 412
 Wukasz, R. F. 1683
 Wulfert, K. 491
 Wunder, T. 2517
 Wyatt, G. M. 2775
 Wyatt, J. M. 2410
 Wyatt, M. K. 2943-2944
 Wyer, M. 1127
 Wymelenberg, A. V. 3872
 Wys, S. L. de 3463
 Xia, Y. C. 1372
 Xia, Y. H. 1838
 Xiao, Y. 3357
 Xiaoli, Q. 3369
 Xiasheng, G. 2247
 Xie, W. 75
 Xie, Y. M. 2701
 Xing, D. K. L. 2162
 Xing, X. H. 3632
 Xixuan, X. 2099
 Xu, H. 3208
 Xu, J. 3388
 Xu, K. C. 16
 Xu, N. 603
 Xu, S. 297
 Xu, X. 2164
 Xu, Y. 75
 Xun, L. Y. 591, 610, 781
 Yaacob, N. H. 2920
 Yabe, K. 2859
 Yadav, J. S. 3466, 3598
 Yager, J. 2947
 Yagi, A. 2134
 Yagi, K. 1828
 Yagi, O. 564, 3444, 3662
 Yagi, S. 1828
 Yagishita, T. 3346
 Yagodnik, C. 2105
 Yaguchi, M. 808, 3520
 Yahya, M. T. 1746, 2897, 3067, 3147
 Yajima, T. 2998
 Yakimov, M. M. 3638
 Yamada, A. 2103
 Yamada, H. 771
 Yamada, K. 2478, 3753
 Yamada, T. 594, 607
 Yamagiwa, K. 2332
 Yamaguchi, F. 1326
 Yamakawa, T. 457
 Yamamoto, K. 2762
 Yamamoto, R. 465, 1503
 Yamamoto, R. T. 189
 Yamamoto, S. 2514
 Yamamoto, Y. 260, 2330
 Yamamura, S. 3642
 Yamanaka, H. 933
 Yamanaka, T. 3862
 Yamani, M. L. 100
 Yamauchi, M. 1394
 Yamauchi, N. 933
 Yamazaki, H. 3108
 Yamini Kulkarni 2778
 Yan, G. 1732
 Yan, H. 3441
 Yan Hai 3441
 Yanagishita, H. 2459
 Yanenko, A. 1791
 Yang, B. L. 16
 Yang, C. H. 459
 Yang, J. C. 1818
 Yang, P. Y. 721, 1190, 2271, 2685, 3720
 Yang, R. 886, 956
 Yang, S. H. 2660, 3776
 Yang, S. Y. 2465
 Yang, W. 3500
 Yang, W. M. 3854
 Yang, X. Z. 16
 Yang, Y. 1667
 Yang ShuHui 3776
 Yangüela, J. 89
 Yanko, W. A. 1907
 Yano, K. 2865
 Yap, M. G. S. 2392, 2637
 Yap, M. Y. 558
 Yasui, H. 3317
 Yatome, C. 525, 2666
 Yazaki, J. 1239
 Yazgan, A. 1573
 Ye, C. M. 3441
 Ye, L. 2235
 Ye ChangMing 3441
 Yearsley, D. 1969
 Yee, R. B. 3035
 Yeh, A. C. 2357
 Yeh, C. H. 984
 Yeh, S. L. 3406
 Yesilada, E. 3758

- Yesilada, Ö. 3758
 Yi, Q. 2549
 Yiao, Y. 1595
 Yim, D. K. 805, 1784
 Yin, C. Q. 3441
 Yin ChengQing 3441
 Yin Shen 3895
 Yinda, G. 355
 Yndestad, M. 2954
 Yndgaard, L. 678
 Yocum, P. S. 1515, 3219
 Yohalem, D. S. 1081
 Yokoama, A. 2176
 Yokoi, H. 2733
 Yokoyama, S. 1839
 Yokoyama, S. Y. 3346
 Yomo, T. 3609
 Yonaga, M. 3808
 Yonezawa, Y. 613
 Yonge, D. R. 1579
 Yoon, S. C. 472
 Yoshida, T. 613, 2383
 Yoshida, Y. 2865
 Yoshikawa, H. 1697
 Yoshimoto, M. 1939
 Yoshimura, H. 2761
 Yoshino, T. 3632
 Yoshioka, H. 1697
 Yoshiyama, K. 219
 Yoshizako, F. 502
 Yoshizawa, T. 1961
 Young, C. S. 801
 Young, H. 257
 Young, K. D. 3570, 3829
 Young, L. O. 377
 Young, L. Y. 1528, 3438, 3596
 Young L. Y. 3573
 Yu, C. 504
 Yu, C. M. 1097, 2018
 Yu, C. W. 673, 3617
 Yu, F. 3499
 Yu, F. P. 3066
 Yu, G. K. 45, 1898
 Yu, J. 424, 528
 Yu, P. 728
 Yu, V. L. 3036
 Yu, W. 3174
 Yuen, G. A. 940
 Yurukova, L. 1578
 Yuyama, Y. 1202
 Zaborina, O. 1516
 Zabranská, J. 1679, 1684
 Zacchi, G. 3379
 Zachariae, W. 548
 Zacharias, B. 3568
 Zacheus, O. M. 1027
 Zadrzil, F. 1403
 Zagorc-Koncan, J. 1682
 Zahid, W. 444
 Zahid, W. M. 1392
 Zahringer, K. 1778
 Zähringer, U. 892
 Zahrt, T. C. 781
 Zaidi, N. 163
 Zainuldin, T. 2004
 Zaloum, R. 2653-2654, 3802
 Zam, S. G. 262, 1818
 Zambou, H. R. 2057
 Zanardini, E. 203
 Zanelia, A. 2598
 Zapata, M. 2218
 Zaranyika, M. F. 2587
 Žarnovský, L. 1580, 1678
 Žarnovský, L. 2623
 Zart, D. 2633
 Zartarian, F. 3321
 Zarzo, D. 637, 3639
 Zdanov, A. 243
 Ze, T. H. 1939
 Zebchuk, P. A. 1968
 Zee, F. van der 662
 Žegarska, Z. 2681
 Zeghal, S. 1304
 Zehnder, A. J. B. 3504, 3707
 Zeikus, J. G. 437, 3600
 Zeiss, C. 2365
 Zeitoun, A. A. M. 149
 Zellner, G. 1222, 1224, 3861
 Zeman, J. 2613
 Zenda, H. 3058
 Zender, J. A. 1700
 Zeng, A. P. 1521
 Zenova, G. M. 3717
 Zeschmar-Lahl, B. 1240, 1257
 Zeyer, J. 3558
 Zhan, F. C. 1372
 Zhan, W. 1254
 Zhang, C. K. 3377
 Zhang, J. 1132
 Zhang, Q. 874
 Zhang, R. T. 16
 Zhang, T. C. 330, 434, 441, 1176, 1189, 1216, 2284
 Zhang, W. 3201
 Zhang, X. M. 1811
 Zhang, Y. 1447, 3553
 Zhang, Y. G. 712
 Zhang, Y. Y. 1372
 Zhang, Z. Q. 3871
 Zhanpeng, J. 2247
 Zhao, H. 682
 Zhao, T. 183, 1949
 Zhao, X. 2527
 Zhao, Y. G. 2553
 Zhdanova, N. N. 3755
 Zhenbo, D. 3369
 Zheng, H. 3737
 Zheng, S. 1595
 Zhilenkov, E. L. 1022
 Zhilina, T. N. 2744
 Zholdakova, Z. I. 2464
 Zhong, A. L. 3776
 Zhong AnLong 3776
 Zhou, E. 2519
 Zhou, F. F. 1451
 Zhou, P. 1279
 Zhou, Q. X. 3332
 Zhou, W. C. 724, 3777
 Zhou, X. 1746, 2154
 Zhou, X. J. 1427
 Zhou, Z. J. 16
 Zhou QiXing 3332
 Zhuang, G. 1595
 Zhuang, P. 2457
 Zilio-Grandi, F. 3744-3745
 Zimmerman, C. 491
 Zimmermann, W. 724, 3777
 Zinder, S. H. 2511
 Zinebi, S. 343
 Zink, R. 47
 Zitko, V. 3419
 Zizil, M. 2142
 Zocco, T. G. 1584
 Zokolovic, Z. 12
 Zolotukhina, L. M. 3825
 Zotter, K. 340, 3909
 Zouboulis, A. 1681
 Zouboulis, A. I. 647
 Zuleger, W. 69
 Zulkali, M. D. 3281
 Zumbusch, P. von 1223
 Zupancic, T. J. 3858
 Zvauya, R. 1674
 Zwietering, M. H. 836, 876, 1869, 1903
 Zyl, C. van 2754
 Zysset, A. 279

SUBJECT INDEX

- 2,2'-Dihydroxybiphenyl**, biodegradation, *Pseudomonas* 2428
- Abattoirs**
beef, meat hygiene, USA 10
equipment
contamination
pigs
carcasses
Campylobacter, Canada 1025
Escherichia coli, Canada 1025
Salmonella, Canada 1025
- machinery
microbial contamination
Aeromonas 2130
Listeria 2130
Yersinia 2130
- pigs
carcasses
microbial contamination
Aeromonas 2130
Listeria 2130
Yersinia 2130
- poultry
carcasses
bacterial count 911
mathematical models 1006
processing, broilers, carcasses, microbial contamination, Kuwait 2074
slaughtering equipment, microbial contamination, assessment, India 2127
structures, surfaces, condensates, microbial contamination 3026
waste water treatment
anaerobic digestion, mathematical models, kinetics 3818
fluidized beds, anaerobic conditions 3817
- Absidia orchidis**, biomass, heavy metals, sorption 3665
- Acaricidal plants**, essential oils, stored products pests, *Tyrophagus longior*, control 3079
- Acenaphthene**, biodegradation, *Alcaligenes* 1517
- Acer saccharum**, sap, utilization, *Enterobacter agglomerans*, polysaccharides, production 3383
- Acetaldehyde**, production, ethanol, utilization, *Hansenula polymorpha* 3380
- Acetamide**, biodegradation, sludges, anaerobes 1436
- Acetates**
addition, effects, phosphorus, removal, activated sludge 2257
biodegradation
anaerobes, kinetics, reviews 3440
sediment, rivers, organic compounds, inhibition, Germany 277
production
bacteria, reviews 1799
fermentation, *Acetobacter*, species, characterization 2744
pyruvic acid, fermentation, sulfate reducing bacteria 652
utilization
methane production
Clostridium, genetic engineering 1420
microorganisms, reviews 485
- Acetic acid**
culture media, *Listeria monocytogenes*, enzyme activity 1099
effect, anaerobic conditions, propionic acid, biodegradation, *Methanobacterium thermoautotrophicum* 3488
production, cocoa beans, fermentation, bacteria, population dynamics 1984
- Acetobacter**, species, characterization, fermentation, acetates, production 2744
- Acetobacterium woodii**
fuels
additives
alcohols, biodegradation, sediment 1432
esters, biodegradation, sediment 1432
ethers, biodegradation, sediment 1432
ketones, biodegradation, sediment 1432
methyl esters, biodegradation, anaerobic conditions 2605
- Acetoin**, biodegradation, *Pelobacter carbinolicus*, enzymes, characterization 2746
- Acetone**
biodegradation, *Desulfobacterium cetonicum*, biochemical pathways 2418
production, potato waste, utilization, *Clostridium acetobutylicum* 541
- Acetonitrile**, biodegradation, *Pseudomonas putida*, kinetics 2441
- Acetovanillone**, methylation, *Phanerochaete chrysosporium*, biochemistry 2751
- Acid mine drainage**
Acidiphilium multivorum, new species 746
aluminium, removal, bioreactors 745
biological treatment
wetlands
Australia 1359
constructed 1354
copper, removal, bioreactors 745
heavy metals
removal
aerobic treatment, wetlands, USA 1358
anaerobic treatment, wetlands, USA 1358
iron, removal, bioreactors 745
sulfate reducing bacteria, techniques, characterization, DNA probes 311
sulfides, microbial leaching, North America 3792
treatment, mushroom compost 412
zinc, removal, bioreactors 745
- Acidianus brierleyi**
coal
desulfurization 3799
hydrogenation 748
diphenyl methane, hydrogenation 748
fumarate, hydrogenation 748
- Acidiphilium cryptum**
antibiotic resistance
gene expression 3845
gene transfer 3845
- Acidiphilium cryptum**
phenol
biodegradation
gene expression 3845
gene transfer 3845
- Acidiphilium multivorum**, new species, acid mine drainage 746
- Acids**
sprays, beef, *Escherichia coli*, control 961
tolerance, *Salmonella enteritidis*, temperature, effects 3123
- Acinetobacter**
foods, characterization 1074
health centres, wastes, characterization 1074
hexadecane, biodegradation, polluted water, Argentina 565
hospitals, wastes, characterization 1074
metabolism, variation, activated sludge 3830
petroleum, microbial contamination 3008
phosphorus, removal, activated sludge 1308
rubber industry, effluents, biodegradation, kinetics 1752
- Acinetobacter cont.**
sewage
nitrates, removal, reviews 3707
phosphates, removal, reviews 3707
- Acinetobacter calcoaceticus**
activated sludge, phosphates, uptake, immobilization 3746
ethyl esters, reduction 664
hexanoic acid, reduction 664
immobilization, growth, activated sludge, phosphates, removal 3748
ochratoxins, biodegradation 67
paper mill sludge, biodegradation 2663
- Acinetobacter johnsonii**
immobilization, growth, activated sludge, phosphates, removal 3748
Pseudomonas diminuta, thiocyanates, biodegradation 667
- Acinetobacter junii**, inoculation, water purification, biological treatment, activated carbon, beds 1747
- Acinetobacter wolffii**, gene expression, esterases 786
- Acrylamides**, production, *Rhodococcus rhodochrous*, enzymes, biotechnology 771
- Acrylic acid**, biodegradation, β -hydroxypropionic acid, production, *Byssoschlamys* 466
- Acrylic acids**, biodegradation, sludges, granules, anaerobes, initiation 3477
- Acrylonitrile**
biodegradation, soil 501
production, effluents, biodegradation, bacteria 2410
- Actinides**, absorption, *Mycobacterium smegmatis*, biochemistry, kinetics 3690
- Actinomadura**, xylan, hydrolysis, xylanase, genes, cloning 803
- Actinomyces**, petroleum, microbial contamination 3008
- Actinomycetales**
activated sludge, scum, formation, mathematical models 1321
dyes, decolorization 724
fuel oils, biodegradation, polluted soils, bioremediation, Arab countries 2502
growth, temperature, activated sludge, foaming 3315
industrial wastes, decolorization 724
isolation, worm casts, rock phosphate, utilization, Nigeria 692
p-nitrophenol, biodegradation, starvation, effects 3597
oil refinery wastes, biodegradation, polluted soils, bioremediation, Arab countries 2502
- Activated carbon**
bacteria, inoculation, water purification, triazine herbicides, biodegradation 3631
beds
biological treatment
water purification
Acinetobacter junii, inoculation 1747
Rhodococcus rhodochrous, inoculation 1747
microbial activities, techniques, estimation, assays 2782
treatment, toxic substances, waste water, determination, bioassays, bacteria 3198
- Activated carbon+biomass**, adhesion, liquid wastes, biological treatment, evaluation, scanning electron microscopy 2251
- Activated sludge**
Acinetobacter, metabolism, variation 3830
Acinetobacter calcoaceticus, immobilization, growth, phosphates, removal 3748

Activated sludge cont.

- Acinetobacter johnsonii*, immobilization, growth, phosphates, removal 3748
- activated carbon, addition, pulp mill effluent, biological treatment 1727
- activated sludge
 - denitrification, control, electrodes 2256
 - nitrification, control, electrodes 2256
- activation, foaming, *Nocardia*, identification 1300
- aeration
 - basins, design, sewage, treatment, Germany 404
 - temperature, mathematical models, dynamics 3319
 - waste water treatment, oxygen, uptake, estimation 2324
- aerobic conditions
 - biofilms, nutrients, removal, waste water 3326
 - denitrification, *Thiosphaera pantotropa* 3722
- aerobic digestion, bioreactors, sewage sludge, production, reduction, biological treatment 3317
- aerobic treatment
 - anaerobic treatment
 - nitrification, denitrification, USA 1653
 - phosphorus, removal, bacteria, characteristics 1302
- alkyltrimethylammonium salts, biodegradation 1424
- amines, biodegradation, oil refinery wastes, Taiwan 1693
- anaerobic conditions
 - aerobic conditions
 - control
 - nitrogen, removal 2330
 - phosphorus, removal 2330
- anaerobic digestion
 - foaming, control, design 1385
 - photography, waste water, biological treatment 1691
- bacteria
 - bacterial count, techniques, assessment 1303
 - characterization, RNA probes 1155
 - fatty acids esters, biodegradation 2424
 - filamentous
 - phenotypes 1820
 - techniques, identification, isolation, micromanipulation 1299
 - monitoring 2254
 - benzimidazoles, biodegradation 655
 - benzothiazoles, biodegradation 655
 - biofilms, formation, supports, magnetic, performance 393
 - biological filtration
 - nutrients, removal, waste water 3699
 - suspended solids, removal, nitrification 3305
 - biological fixed-film systems
 - anaerobic treatment, dyes, biodegradation 2652
 - biomass, population dynamics 1156
 - biological treatment
 - aircraft, paints, stripping, waste water, microbiology 2678
 - linear alkylbenzene sulfonate, biodegradation, waste water, Italy 2580
 - sewage
 - Aeromonas veronii*, removal, Italy 293
 - mathematical models, optimization 1284
 - surfactants, biodegradation 2581
 - waste water, mathematical models, optimization 1284
 - biomass
 - antiviral properties, viruses, inactivation 3164
 - determination, DNA 1154
 - estimation, respiration, rates 409
 - bioreactors
 - aeration, sewage, biomass, adhesion, plastics 1295

Activated sludge cont.

- bioreactors cont.
 - biological fixed-film systems, sludges, granulation, comparisons 3250
 - 4-chlorophenol, biodegradation, computers, control 1538
 - dynamics, industrial wastes, biological treatment, time series, data analysis 411
 - mathematical models 3322
 - membranes + filtration, sewage, treatment, evaluation 2332
 - microbial flora, indexes, monitoring 301
 - performance, pulp mill effluent, biological treatment 1728
 - toxic substances, biodegradation, computers, control 1538
 - waste water, saline water, biological treatment, Spain 1665
- bulking
 - aerobic conditions, mathematical models 1290
- bacteria
 - growth 1311
 - nutrients 3316
 - control, mathematical models, UK 2328
 - denitrification, incomplete, effects 1323
 - effects, industrial wastes, effluents 1662
- foaming
 - bacteria, filaments, design, control 1313
 - control, phosphorus, removal 1322
 - sewage, microorganisms, characteristics, Italy 1325
 - techniques, control, France 1314
- microorganisms, kinetics 1821
- nitrification, denitrification, *Zoogloea*, growth 1324
- performance, paper mill sludge, microorganisms 1735
- sewage, aerobic treatment, heterotrophic microorganisms, nitrifying bacteria, competition 1287
- chemical oxygen demand
 - mass balances 403
 - quantification, sewage, biological treatment, mathematical models 2258
 - techniques, estimation, network analysis 1329
- chlorophenol, biodegradation, *Rhodococcus chlorophenolicus*, techniques, quantification, immunofluorescence microscopy 3576
- ciliates, biomass, population dynamics 1840
- clarifiers
 - design 445
 - sewage, influent, effects 398
- coal
 - carbonatation, waste water, biological treatment 2674
 - carbonization, waste water treatment, ozone 749
- coke, production, waste waters, phenolic compounds, removal, biological treatment, Poland 590
- consortia, 2,4-D, biodegradation 3632
- control
 - computer simulation, nitrogen, measurement, mathematical models 1285
 - expert systems
 - nutrients
 - removal
 - sewage, Germany 671
 - waste water, Germany 671
 - nitrogen, removal, Denmark 2620
 - phosphorus, removal, Denmark 2620
 - respirometry, mathematical models 408
 - sewage, biological treatment 1328
 - cultures, heavy metals, removal, stimulation 3320

Activated sludge cont.

- cyanides, biodegradation, sewage, treatment 668
- denitrification 2632
 - activated sludge, control, electrodes 2256
 - dissolved oxygen, concentration, effects 3733
 - enhancement 3734
 - filters, biological treatment, upgrading 3740
 - nitrous oxide, production, mathematical models 3736
 - phosphorus, removal, acetate, hydrolysate, substrates 3711
 - products 3712
 - sewage, dynamic models, temperature 685
 - sewage sludge, dewatering, effluent, Germany 2628
 - trimethylamine, effects 3314
 - volatile fatty acids, effects 3314
- design
 - industrial wastes, waste water, biological treatment 2322
 - performance, brewery effluent, aerobic treatment 3762
 - upgrading, nutrients, removal, Germany 1294
- 1,4-dichlorobenzene, biodegradation 579
- 2,4-dinitrophenol, biodegradation, bacteria, techniques, enumeration 1537
- distillery effluent, waste water treatment 713
- dynamic models 1327
- dynamics
 - mathematical models 2334
 - sewage, treatment 1289
- efficiency
 - waste water treatment
 - aeration, pressure 1305
 - nitrogen, Iraq 2325
 - phosphates, Iraq 2325
 - winemaking residues, Italy 3330
- effluents
 - odour abatement, biological filtration 385
 - quality, ciliates, indicator species 1842
- excess, storage, anaerobic conditions, microbiology 1288
- exopolymers, identification, gel filtration chromatography 1856
- flocs
 - structure, bacteria 3321
 - substrates, effects 3325
- fluidized beds, waste water treatment 2321
- foaming
 - actinomycetales, growth, temperature 3315
 - control
 - bacteria 1320
 - enzymes 1320
 - Microthrix*, France 1316
 - Microthrix parvicella*
 - isolation 1114
 - Netherlands 1319
 - nitrification, sewage, UK 3328
 - foams, formation, *Rhodococcus rubra*, kinetics 396
 - fungi, properties, Australia 394
 - hardboard, laminated wood, production, waste water treatment, anaerobic treatment, preliminary treatment 1717
- industrial wastes
 - bacteriophages, removal 389
 - coliform bacteria, removal 389
 - waste water, nitrification, denitrification, mathematical models 1635
- inhibition
 - chlorine 392
 - chromium 2323
 - hydrogen peroxide 392
- mathematical models 3309
- microbial flora
 - growth
 - chromium, effects 3846

Activated sludge cont.

microbial flora cont.

growth cont.

phenolic compounds, biodegradation, mathematical models, kinetics 1529

phenols, biodegradation, mathematical models, kinetics 1529

respiration, inhibition, determination, patents 3197

reviews 1864

microorganisms

death, mathematical models 787

organic compounds, toxicity, mathematical models, structure activity relationships 401

mineralization, measurement 3327

naphthylamine, biodegradation, microorganisms 566

nitrates, removal, mathematical models 1611

nitrification 2632

activated sludge, control, electrodes 2256

characterization, waste water treatment, design, upgrading, Denmark 678

measurement 3327

oxygen, uptake 2333

phosphorus, removal, acetate, hydrolysate, substrates 3711

population dynamics 1650

sewage, dynamic models, temperature 685

waste water, mathematical models 1642

nitrogen

mass balances 403

removal

bacteria, yeasts, injection 1636

mathematical models 682

slaughterhouse waste, biological treatment, mathematical models 1782

waste water, biological treatment, control, redox potential 617

Nocardia, techniques, estimation, immunofluorescence 1317*Nocardia pinensis*, morphology, variation, Australia 395

nutrient removal, aeration, control, redox potential 673

nutrients

removal

bacteria 1817

filaments, formation, reviews 1312

methanol, addition, Sweden 3704

microbial flora 3693

polymers, characteristics 1614

olive oil, production, waste water treatment, models 696

operation

expert systems, microbial flora, microscopy 2326

low temperatures, sewage, treatment, mathematical models 399

toxic substances, effects, assessment 2329

optimization, winemaking residues 3313

organic compounds

removal 3464

slaughterhouse waste, biological treatment, mathematical models 1782

oxidation, equations 390

oxygen + biological filtration, coke, ovens, waste water, biological treatment, Australia 3801

oxygen transport, waste water treatment, models 1296

p-nitrophenol, biodegradation, microorganisms, characteristics 1326

performance

control, mathematical models, dynamics 2327

denitrification, monitoring, fluorescence 684

dyes, removal, assessment 391

Activated sludge cont.

performance cont.

nitrification, monitoring, fluorescence 684

pharmaceutical products

production, waste water, biological treatment, pretreatment, iron, hydrogen peroxide 723

waste water, biological treatment, sludges, disposal 1683

phenol, biodegradation 3580

phenols, removal, chemical industry, waste water 601

phosphates

removal, heavy metals, inhibition 1297

uptake, *Acinetobacter calcoaceticus*, immobilization 3746

phosphorus

release, monitoring, electrical conductivity 3751

removal

acetates, addition, effects 2257

Acinetobacter 1308

bacteria, identification 3743

bioreactors 1659

cells, pH, control 3724

determination 690

Dreissena polymorpha 688

ethylene diaminetetracetic acid 2636

mathematical models 410

nitrification + denitrification, Italy 3744-3745

nitrotriatic acid 2636

sewage 687

South Africa, monitoring, control 2635

UK 670

photography, waste water, biological treatment 1426

piggery effluent

biodegradation, *Phormidium* 1768

biological treatment, nitrous oxide, emission 3808

plasmids, evaluation, comparisons 3312

polychlorinated biphenyls, biodegradation, *Alcaligenes* 3472

polydimethylsiloxanes, inhibition 3318

polyethylene glycol, pellets, nitrogen, removal, sewage sludge, drying, gases 1630

potatoes, wastewater, biological treatment, microorganisms, augmentation 2320

powdered activated carbon, petrochemical industry, biological treatment, Israel 727

Pseudomonas, isolation, alkylphenol ethoxylate, biodegradation 3640

pulp and paper industry

effluents, biological treatment, Canada 2653-2654

waste water

biological treatment 1426

mathematical models, settlement 1711

phosphorus, addition 1712

nutrients, discharges, control 1713

pulp mill effluent

biodegradation, biological treatment 1725

biological treatment 1726

Sweden 1710

respiration

inhibition, measurement, biosensors, automation 1146

mathematical models 3323-3324

respiration rate

estimation 2255

oxygen transfer, waste water treatment, techniques, monitoring 297

retention times, bacteria, population dynamics 1301

rotating biological contactors

ciliates, biomass, biofilms, monitoring 1841

hydrocarbons, biodegradation, petrochemical industry, waste water, comparisons 1508

Activated sludge cont.

scum, formation, Actinomycetales, mathematical models 1321

sedimentation, oxygen, effects 1315

selectors, application, heavy metals, removal 1582

settlement, nutrients, removal, Denmark 1309

settling, characteristics 2331

sewage

bacteriophages, removal 389

biological treatment

flow, dynamics 1292

mathematical models 3310

microbial activities, techniques, monitoring 3180

coliform bacteria, removal 389

faecal coliforms, removal, France 331

holiday accommodation, biological treatment, Turkey 769

hotels, biological treatment, Turkey 769

organic matter, biodegradation, hydrolysis 3311

slaughterhouse waste, biological treatment, nitrification, chemical oxygen demand, removal 3816

sludges, primary + anaerobic digestion, evaluation 3351

stabilization 388

stoichiometry, organic wastes, synthetic 397

sugar factory waste, waste water treatment 713

supports, plastics, nitrification, kinetics, biomass, growth 1310

surfactants

biodegradation 3642

sewage, treatment, Switzerland 635

tetrachlorobenzyltoluenes, biodegradation, *Alcaligenes* 3472

textile industry

waste water treatment

3-aminobenzenesulfonate, biodegradation, filters, inoculation 1740

3-nitrobenzenesulfonate, biodegradation, filters, inoculation 1740

Thiothrix, growth, physiology 1318

toluene diamine, biodegradation, Japan 2437

updating, sewage, biological treatment, Austria, design, performance 1293

upgrading

aeration, tanks, design, mathematical models 405

denitrification, Sweden 1777

nitrogen, removal, sewage, industrial wastes, Slovenia 1640

nutrients, removal, Australia 1609

variation, plant design, mathematical models 406

waste water

biodegradation, mathematical models 407

cadmium, adsorption 1580

carbohydrates, biodegradation, α -amylase, enzyme activity 2710

nitrogen, removal, reviews 1298

waste water treatment

catalases, enzyme activity, monitoring 1208

microbial flora, characterization, Germany 400

nitrous oxide, emission 3329

Activated sludge + bioreactors, moving bed, nitrogen, removal 1638**Activated sludge + crossflow microfiltration**, sewage, biological treatment 1286**Activated sludge + fluidized beds**, pulp and paper industry, waste water 1724**Activated sludge + media**, polyurethane, sewage, biological treatment 1291**Activated sludge+molasses**

pig manure

denitrification 1764

nitrification 1764

Adenoviridae

- polluted water, detection, polymerase chain reaction 3188
- sewage, detection, polymerase chain reaction 3188
- survival, water 3093
- water, recovery, filters, efficiency 3094

Adriatic Sea

- bacteria 3090
- DNA 3090
- mussels, toxins, monitoring 2014
- pollution, mucilages, pathogens 1874
- viruses 3090

Aeration

- control, redox potential, nutrient removal, activated sludge 673
- equipment, oxidation ditches, testing 3334
- hydrogen sulfide, emission, control, waste water, sewerage, Kuwait 3260
- pressure, waste water treatment, activated sludge, efficiency 1305
- sewage sludge, anaerobic digestion, thickening 440
- tanks, design, activated sludge, upgrading, mathematical models 405
- whey, fermentation, *Candida kefir*, ethanol, production 3382

Aerobes

- biological filtration, determination, bacterial count 3908
- chlorinated hydrocarbons, biodegradation, cultures techniques, enrichment 2400
- enrichment
 - phenol, phenolic compounds, biodegradation 1536
 - toluene, phenolic compounds, biodegradation 1536
- nitrotoluene, biodegradation, bioreactors 3450
- trifluoroacetate, biodegradation, soil 3448
- trifluoromethylbenzoate, biodegradation 2451
- 2,4,6-trinitrotoluene, biodegradation, cometabolism, molasses 1500

Aerobes + anaerobes, aromatic compounds, biodegradation, environment, bioremediation 2268**Aerobic conditions**

- activated sludge
 - bulking, mathematical models 1290
 - denitrification, *Thiosphaera pantotropha* 3722
- brewery effluent, biological treatment, temperature 1674
- chlorinated hydrocarbons, biodegradation, microorganisms, enzymes 2453
- chlorobenzoic acids
 - biodegradation
 - Alcaligenes* 2425
 - Pseudomonas* 2425
- groundwater, chlorinated hydrocarbons, biodegradation 2526
- lamb (meat)
 - Pseudomonas fluorescens*, growth 2053
 - Pseudomonas fragi*, growth 2053
 - Pseudomonas lundensis*, growth 2053
- poly-(β -hydroxybutyrate-co- β -hydroxyvalerate), biodegradation, microorganisms 3614
- tetrachloroethylene, biodegradation 3436
- toluene, biodegradation, *Pseudomonas maltophilia* 3554
- trichloroethylene, biodegradation 3436
- xylene, biodegradation, *Pseudomonas maltophilia* 3554

Aerobic digestion

- anaerobic digestion, sewage sludge 1376
- sewage sludge, thermophilic microorganisms, UK 427

Aerobic treatment

- aerobic treatment, bioreactors, nutrients, removal, mathematical models, optimization 683
- anaerobic treatment
 - activated sludge, nitrification, denitrification, USA 1653

Aerobic treatment cont.**anaerobic treatment cont.**

- refuse, sewage sludge, composting, Austria 764
- sewage sludge, bioreactors, redox potential, monitoring 1378
- sludges, bioreactors, redox potential, monitoring 1378
- Aspergillus awamori*, distillery effluent, Japan 2642
- azo compounds, biodegradation, rotating biological contactors, biofilms 1597
- biofilms, nitrification, bacteria, predation 1654
- biological fixed-film systems, anaerobic treatment, sewage, Germany 1192
- bioreactors
 - aerobic treatment, nutrients, removal, mathematical models, optimization 683
 - 1,2-dichloroethane, biodegradation 1435
 - fluidized beds, biofilms, chlorophenols, removal, groundwater 2555
 - membranes, activated carbon, volatile compounds, biodegradation, waste water 2446
 - wood panels, production, waste water 2680
- brewery effluent, activated sludge, design, performance 3762
- chemicals, biodegradation, mathematical models 304
- heavy metals, removal, acid mine drainage, wetlands, USA 1358
- piggery effluent, volatile compounds, odours, monitoring 1763
- sewage
 - activated sludge, bulking, heterotrophic microorganisms, nitrifying bacteria, competition 1287
 - bioreactors, membranes 344
- sewage sludge
 - bacteria, biodegradation, carboxylic acids, production 341
 - Norway 2280
 - thermophilic microorganisms 3262-3263
- waste water
 - biological fixed-film systems
 - design, performance 1212
 - sulfates, effects 1214
 - bioreactors
 - microorganisms
 - aerobes 3257
 - anaerobes 3257
 - oxidation ditches, methodology 2335
 - waste water treatment
 - bioreactors
 - bacteria
 - characterization 343
 - identification 343
- wastes
 - biological treatment, reviews 1209
 - pathogens, inactivation, temperature 2241

Aerobic treatment + anaerobic digestion, sludges, biodegradation, pH, control 2275**Aerobic treatment + anaerobic treatment**

- anaerobic digestion, pH, control 336
- bioreactors, pulp and paper industry, waste water 1716
- hemp, sulfate pulping, waste water 1719
- phosphorus, removal, waste water, temperature 3742
- waste water, pH, control 336

Aerobic treatment+acid treatment, waste water, nitrobenzene, biodegradation 1427**Aerococcus viridans**, foods, detection, polymerase chain reaction 1935**Aeromonas**

- abattoirs
 - machinery, microbial contamination 2130
- pigs, carcasses, microbial contamination 2130
- distribution, polluted water, marine areas, Spain 265

Aeromonas cont.

- drinking water, identification, chromatography 1911
- enterotoxins, production, culture techniques 1946
- foods
 - isolation, culture media 869
 - toxins, production 2917
- identification, polymerase chain reaction 2188
- infectivity
 - food poisoning 2210
 - foodborne diseases 2210
- inhibition, of *Legionella* 1062
- lakes, seasonal variation, USA 276
- petroleum, microbial contamination 3008
- phenotypes
 - distribution
 - blood, Finland 2830
 - drinking water, Finland 2830
 - foods, Finland 2830
 - human faeces, Finland 2830
 - prawns, fresh water, microbial contamination, Bangladesh 2966
 - seafoods, microbial contamination, isolation, identification 2965
 - water, microbial contamination, *Larus delawarensis*, public health 3227

Aeromonas hydrophila

- characteristics 2183
- control
 - heat treatment
 - ascorbic acid, effects 3048
 - sodium chloride, effects 3048
 - pigmeat, essential oils 2047
- fish, beef, contamination, temperature, tropics 963
- growth
 - beef
 - modified atmosphere storage 960
 - vacuum packaging 960
 - foods 250
 - temperature, assessment, comparisons 2199
- survival
 - foods, proteinases, production 1887
 - water 251

Aeromonas veronii, removal, sewage, biological treatment, activated sludge, Italy 293**Aerosols**

- antibiotics, solutions, microbial contamination, bacteria 2098
- microorganisms, production, sewage, treatment, monitoring 303
- molds, dwellings, air 283
- samplers, calibration, air microbiology, spectrometry 3246

Aflatoxin, biosynthesis, *Aspergillus parasiticus*, reduction, activity 2859**Aflatoxins**

- cereal products, contamination, Nigeria 903
- feeds, contamination, reference materials 899
- production
 - fungi, fodder, storage quality, poultry 897
- seeds
 - fungi
 - temperature, melons, Nigeria 898
 - water activity, melons, Nigeria 898

Africa

- feeds, contamination, mycotoxins 62
- fermented foods, *Lactobacillus*, bacteriocins, production, pathogens, control 103
- foods, contamination, mycotoxins 62

Agar, fruit, moulds, control, vanillin 3055**Agaricus bisporus**, lignin, biodegradation, peroxidases 3518**Agricultural byproducts**

- saccharification
 - Arthrographis*, cellulase 2470
 - Sporotrichum pruinosum*, cellulase 2470

Agricultural wastes

- anaerobic digestion, UK 3348

- Agricultural wastes cont.**
 biodegradation
Fusarium oxysporum, mutants, xylanase, production 3515
Streptomyces, xylanase, production 3804
 biological treatment, reviews 1757
 composting, plastic tunnels, odour abatement 1258
 composting + anaerobic digestion, methane production 1758
 food wastes, composting, evaluation, USA 361
 refuse, recycling, biological treatment, Norway 3358
 utilization, xylitol production, *Candida guilliermondii* 2474
- Agrobacterium**, isolation, soil, nitriles, biodegradation 531
- Agrobacterium radiobacter**
 bromoxynil, biodegradation 2574
 chromate, reduction, detoxification 3671
- Agrobacterium tumefaciens**
 activated sludge, fatty acids esters, biodegradation 2424
 phenolic compounds, biodegradation, biochemical pathways, genetics 3595
- Ailanthus altissima**, roots, buildings, biodeterioration, Portugal 3024
- Air**
 contamination
 endotoxins, sampling, comparisons 3157
 organic compounds, removal, biological treatment, mathematical models 2235
 emissions, heat treatment, condensates, addition, pulp mill effluent, biological treatment, effects 1706
 microbial contamination, buildings, detection, Spain 1872
- Air conditioners**
 air quality, bacteria, desiccation, resistance 2823
 dust, Gram negative bacteria, monitoring 3111
 filters, air spora, United Arab Emirates 1026
- Air filters**, contamination, *Stachybotrys atra*, satratoxins, production 204
- Air microbiology**
 aerosols, samplers, calibration, spectrometry 3246
 detection, equipment, comparisons 2852
 sampling, equipment, comparisons 2852
- Air pollutants**, composting, monitoring 3158
- Air pollution**
 composting, buildings, microbial contamination 1257
 indoor, air spora, monitoring, assessment 3160
- Air quality**, air conditioners, bacteria, desiccation, resistance 2823
- Air spora**
 air pollution, indoor, monitoring, assessment 3160
 farms, threshing, India 282
 filters, air conditioners, United Arab Emirates 1026
- Aircraft**
 paints
 stripping
 waste water
 biological treatment
 activated sludge, microbiology 2678
 rotating biological contactors, microbiology 2678
- Alachlor**
 biodegradation
Ceriporiopsis subvermispora 624
Phanerochaete chrysosporium 624
Phlebia tremellosa 624
- Alcaligenes**
 aromatic compounds, biodegradation, genetic engineering 2439
 chlorobenzoic acids, biodegradation, aerobic conditions 2425
 dimethylnaphthalene, oxidation 2509
 diols, biodegradation 1503
- Alcaligenes cont.**
 halogenated hydrocarbons, biodegradation 1503
 oleic acid, biodegradation 503
 polychlorinated biphenyls
 biodegradation
 activated sludge 3472
 soil 2467
 water, sample pretreatment, chemicals, aerobic conditions 3449
 pyridine, biodegradation 1431
 tetrachlorobenzyltoluenes, biodegradation, activated sludge 3472
- Alcaligenes denitrificans**+*Pseudomonas glycinea*+*Pseudomonas marginalis*, mecocrop, biodegradation 3615
- Alcaligenes eutrophus**
 acenaphthene, biodegradation 1517
 alcohols, utilization, polyesters, production 472
 carboxylic acids, utilization, polyesters, production 472
 characterization, aromatic compounds, halogens, biodegradation, heavy metals, resistance 3502
 chlorobenzoates, biodegradation, chloromuconates, production 654
 2,4-D, biodegradation, enzymes 622
 genetic resistance, heavy metals, uptake 3827
 phenotypic stability
 freeze drying, plasmids, viability 1810
 storage, plasmids, viability 1810
 poly-D-3-hydroxybutyric acid, biodegradation 3478
 polyhydroxybutyrate, production 743
 trichloroethylene
 biodegradation
 bioreactors 3474
 genetic engineering 3429
 xylose, biodegradation, poly- β -hydroxybutyric acid, production 3522
- Alcaligenes faecalis**
 phenolic compounds, biodegradation 2540
 poly(vinyl chloride), biodegradation 2563
- Alcaligenes paradoxus**
 acenaphthene, biodegradation 1517
 2,4-D, biodegradation, plasmids 780
 ferulic acid, biodegradation 1526
- Alcaligenes xylooxidans**
 activity, soil inoculation, biological competition 3865
 growth, soil inoculation, biological competition 3865
- Alcaligenes + yeast extracts**, benzoic acids, biodegradation 2433
- Alcaligenes eutrophus**
 biphenyls, biodegradation, genetics 2427
 4-chlorobiphenyl, biodegradation, genetics 2427
- Alcoholic beverages**
 spoilage
 yeasts
 control
 coumaric acids 2151
 potassium sorbate 2151
- Alcohols**
 biodegradation
 fuels
 additives
Acetobacterium woodii, sediment 1432
Eubacterium limosum, sediment 1432
 1-decanol, biodegradation, medium chain fatty acids, production, *Issatchenkia scutulata* var. *scutulata* 517
 1-octanol, biodegradation, medium chain fatty acids, production, *Issatchenkia scutulata* var. *scutulata* 517
 production, *Saccharomyces cerevisiae*, isolation, characterization 3131
 utilization, *Alcaligenes eutrophus*, polyesters, production 472
- Aldehydes**, reduction, bacteria, identification 3423
- Aldicarb**, biodegradation, soil bacteria, Turkey 2571
- Alexandrium**
 toxins
 production
 marine environment
 Canada, biogeography 2222
 USA, biogeography 2222
- Alexandrium minutum**
 bacterial toxins
 production
 nitrogen, effects 2218
 phosphorus, effects 2218
- Algae**
 biofilms, mathematical models 2771
 blooms
 effects, nutrients, rainfall, northwest pacific, coastal areas 1132
 organic nitrogen compounds, marine environment 2232
 phenols
 biodegradation
 reservoirs, Russia 1532
 rivers, Russia 1532
 effects, light, penetration, ponds, biological treatment 414
 fouling, water purification, biological treatment, filters 3785
 growth
 animal manures, ponds, water pollution 2683
 ponds, biological treatment, organic carbon, effects 413
 heavy metals, uptake, tannery waste, anaerobic digestion 1586
 hydrogen, production, energy sources 1589
 interactions, bacteria, diclofop, biodegradation 623
 lead, sorption, marine environment 2590
 monuments, biodeterioration, ecology 3016
 nickel, sorption, marine environment 2590
 nitrification, waste water, lagoons 1622
 organic compounds 1 production, effects, water supply, lakes, water quality 2905
 parathion-methyl, biodegradation, soil 1553
 pigments, absorption, characteristics, algal blooms, determination 272
 ponds, waste water, biological treatment, Israel 3341
 power stations, waste gases, carbon dioxide, fixation 3886
 production
 sewage
 ponds
 amino acids, France 2370
 fatty acids, France 2369
 waste water treatment, ponds, Kuwait 460
 removal, lagoons, waste water treatment, filters, sand, design, USA 447
 sea water, pollution, mucilages, Italy 1131
 stones, monuments, biodeterioration 2122
 toxins, production, reviews 3133
 waste water treatment, ponds 1838
 water purification, concentration 3788
 water quality, recognition, microscopy, computer analysis, algorithms 3186
 zirconium, uptake 649
- Algae + bacteria**, drainage water, selenium, removal, ponds, USA 3694
- Algal blooms**
 algae, pigments, absorption, characteristics, determination 272
Aureococcus anophagefferens, nitrogen, effects, USA 3152
 coastal areas, Spain 2219
 toxins, shellfish, poisoning, New Zealand 2220
 treatment, copper sulfate + calcium hydroxide, hepatotoxins, release, *Microcystis aeruginosa* 3149
 waterways, Australia, economics, externalities 3140
- Algeria**, cellulose, biodegradation, fungi, isolation, arid soils 1830

Aliphatic hydrocarbons

biodegradation

biosurfactants, lipids, production,

Candida antarctica, cerulenin, inhibition 2459*Methylosinus trichosporium*, enzymes, determination, polymerase chain reaction 796

soil pollution, bioremediation, reviews 3207

water pollution, bioremediation, reviews 3207

Aliphatic ketones, biodegradation, *Chlorella pyrenoidosa* 502**Alkaline pulping**

biological treatment, anaerobic digestion, lignin, inhibition 1730

waste water, biological treatment, bioreactors, sludges, granulation 2660

Alkanes

biodegradation

bacteria, surfactants, production, lipids 1792

Candida tropicalis, isocitrate dehydrogenase, characteristics 2514

cyanobacteria, marine environment, coastal areas, Kuwait 1483

dicarboxylic acids, production, *Candida tropicalis*, enzymes 504

oilfields, water, mathematical models, microorganisms, kinetics, USA 3768

production, carbon dioxide + hydrogen, *Desulfovibrio desulfuricans* 3825**Alkyl halides**, biodegradation, *Methanobacterium thermoautotrophicum* 1452**Alkyl sulfides**, biodegradation, *Thiobacillus* 3684**Alkylbenzene sulfonates**, biodegradation, septic tanks, Canada, Ontario 1433**Alkylbenzenes**, biodegradation 1444**Alkyltrimethylammonium salts**,

biodegradation, activated sludge 1424

Almond paste

yeasts

control

cinnamon 2940

sorbic acid 2940

Almonds

aflatoxins, determination 1959

seeds, waste water, cyanide, removal, biological treatment, fluidized beds, aerobic conditions 3687

Alternaria

cherries, postharvest decay 107

monuments, biodeterioration 2112

Alternaria alternata, control, marble, discolouration, biocides, Italy 203**Aluminium**

extraction

bauxite

bacteria 3796

fungi 3796

industry, oily waste water, treatment, bioreactors, membranes 3802

removal, acid mine drainage, bioreactors 745

Aluminium sulfate, water supply, *Dreissena polymorpha*, larvae, removal 223**Amendments**, starch, peptone, *Phanerochaete chrysosporium*, growth, soil, temperature 1554**Amides**, biodegradation, *Pseudomonas*, cell cultures, immobilization 1456**Amines**

biodegradation, oil refinery wastes, activated sludge, Taiwan 1693

biological treatment, fluidized beds 2554

production, microbial activities, sprouts, storage, determination 2011

Amino acidsbiodegradation, *Rhodococcus erythropolis* 3847

removal, waste water, biological treatment, comparisons 2252

3-Aminobenzenesulfonate, biodegradation, filters, activated sludge, textile industry, waste water treatment, inoculation 1740**Ammonia**

absorption, bark, soil, poultry manure,

composting, phosphate rock, solubilization 755

anaerobic digestion, inhibition, mathematical models 1384

emission, control, landfills, biological filtration, USA 2404

measurement, waste water, biological treatment, instrumentation 3196

nitrification, polluted water, sea water, bacteria, activated sludge 402

Nitrobacter, inhibition 1625oxidation, fish culture, waste water, *Nitrosococcus* 795

removal

drinking water, biological filtration, UK 742

Escherichia coli, encapsulation 2743

piggery effluent, bacteria, Taiwan 2621

utilization, cyanide, degradation, *Rhodotorula rubra* 2631

waste water treatment, anaerobic digestion, inhibition 1381

Ammonia treatment, feeds, hay, fungi, infection, nutritive value 1971**Ammonium***Bacillus licheniformis*, denitrification, kinetics 2622

nitrification, in vitro, fungi + yeasts 3721

removal, waste water, sewage sludge, granules, anaerobic treatment 3705

Ampicillin, *Escherichia coli*, resistance, milk products, contamination, Iran 2996**Anabaena**, waste water, nitrogen, removal, mathematical models 674**Anabaena doliolum**, waste water, ions, removal 1605**Anabaena flos-squae**, lakes, seasonal variation, USA 2224**Anabaenopsis milleri**, bacterial toxins, production 888**Anacystis**

dairy effluent, utilization, hydrogen, production 1407

sugar factory waste, utilization, hydrogen, production 1407

Anaerobes

acetamide, biodegradation, sludges 1436

acetates, biodegradation, kinetics, reviews 3440

biological treatment

sewage

sulfates 3814

sulfides 3814

toxicity 3814

waste water

sulfates 3814

sulfides 3814

toxicity 3814

carbon monoxide, metabolism, microbial physiology, reviews 1594

cellulose, biodegradation, hydrogen, production 2492

chlorinated organic compounds, biodegradation, reviews 1801

chloroacetanilide herbicides, biodegradation, soils 1556

3-chlorobenzoate, biodegradation, bioreactors 1501

ethane, biodegradation 2511

initiation, acrylic acids, biodegradation, sludges, granules 3477

interactions

environment, methanogenic 1803

ethylhexanoic acid, biodegradation, mathematical models 2637

kraft mill effluent, glucosioisaccharinic acid, utilization 3414

metabolism, glycine, biodegradation 1800

methyl bromide, biodegradation, sediment 626

phenols

biodegradation 588

metabolism, 4-hydroxybenzoate, biodegradation 1504

propionate, biodegradation, kinetics, reviews 3440

Anaerobes cont.

redox potential, bioreactors, sewage,

treatment, techniques, determination 302

respiration, gene expression, oxygen, effects 1794

sediment, dioxins, biodegradation 3442

sewage sludge, anaerobic digestion, conditions, effects 2351

sludges, anaerobic digestion, conditions, effects 2351

starch, biodegradation, heavy metals, electroplating waste water, methane inhibitors 1221

toluene, biodegradation, denitrification 3573

toxic substances, inhibition, forest industry, waste water, biological treatment 1714

2,4,6-trichlorophenol, biodegradation, pH 2546

wastes, pectins, biodegradation, pectinase, production 2489

Anaerobic conditionsacetic acid, effect, propionic acid, biodegradation, *Methanobacterium thermoautotrophicum* 3488

activated sludge, excess, storage, microbiology 1288

aromatic hydrocarbons, biodegradation, bacteria 2513

biological filtration, seafoods, processing, waste water, sodium, sulfate, effects 1673

butyric acid, effect, propionic acid, biodegradation, *Methanobacterium thermoautotrophicum* 3488

chemical industry, waste water 1664

chlorinated hydrocarbons, biodegradation, aquifers, USA 2506

chlorinated hydrocarbons + aromatic compounds, biodegradation 1512

chlorobenzoate, biodegradation, *Pseudomonas*, genetic engineering 3438

denitrification, substrates, uptake 1651

dichloromethane, biodegradation, *Hyphomicrobium* 3433

2,4-dichlorophenol + p-cresol, biodegradation 1528

2,4-dichlorophenol + propionate, biodegradation 1528

formate, biodegradation, biofilms, models, kinetics 3538

gallic acid, biodegradation, *Eubacterium oxidoreducens* 496heat treatment, *Staphylococcus aureus*, survival 1039

ice cream, production, waste water, biological filtration 2315

iron, enhancement, toluene, biodegradation, sulfate reducing bacteria, USA 3542

methylmercury

production, lakes, sulfate reducing bacteria, Finland 3857

transformation, *Desulfovibrio desulfuricans* 3664

methylquinoline, biodegradation, rivers, sediment 505

organic compounds, biodegradability, techniques, testing 3451

organic matter, mineralization, soil, bacteria 529

pollution, trinitrotoluene, soil, bioremediation, USA 2269

poly-(β -hydroxybutyrate-co- β -hydroxyvalerate), biodegradation, microorganisms 3614

polychlorinated biphenyls, biodegradation, soil, microorganisms 2466

quinolines, biodegradation, rivers, sediment 505

sediment, polychlorinated biphenyls, biodegradation, techniques 3505

toluene

biodegradation, *Pseudomonas*, genetic engineering 3438*Thauera* 2528

waste water, phosphorus, removal, models 686

Anaerobic digesters

- cattle dung, microbial flora 2682
- cellulosic wastes
 - biodegradation
 - Methanobacterium thermoautotrophicum*, morphology 3860
 - Methanosarcina mazei*, morphology 3860
- Clostridium aldrichii*, detection, ELISA 1818
- design
 - biogas, production, cattle manure, India, temperature, effects 1762
 - brewery effluent, biological treatment, bacteria, granules 1663
 - cattle manure, biological treatment, biogas, production, India 2355
 - maize, processing, waste water, biological treatment, bacteria, granules 1663
 - operation, cattle manure+plant residues 1388
 - wastes, biological treatment, India, upland areas 2346
- failure, monitoring, probes 3178
- hybrids, dairy effluent, biological treatment, performance 2646
- inoculation, sludges, microorganisms, consortia, identification 3345
- membranes, control, waste water treatment, measurement, microbial activities 3343
- methane production
 - bacteria, temperature 431
 - Methanobacterium*, temperature 431
 - Methanothrix*, temperature 431
 - microorganisms
 - analysis 299
 - granules, comparisons 437
- microbial flora
 - identification, polymerase chain reaction 797
 - methane production, optimization 492
 - retention time, effects 434
- operation
 - cellulosic wastes, biodegradation, methane production, monitoring 3398
 - crop residues, fermentation, biogas, production, kinetics 3574
- optimization, temperature 3349
- performance, control, neural network 3184
- poultry litter, microbial flora 2682
- Propionibacterium*, identification 432
- refuse, biological treatment, biogas, production, USA 3353
- sewage sludge
 - Methanobacterium defluvii*, taxonomy 3179
 - Methanobacterium thermoflexum*, taxonomy 3179
- sludges
 - bacteria, methane, identification 2353
 - dimethyl sulfoxide, biodegradation, sulfate reducing bacteria, isolation 3445
 - methylmercaptan, biodegradation, sulfate reducing bacteria, isolation 3445
- sorghum, biodegradation, methane production, carbon dioxide, removal 486
- supports
 - bentonite, slaughterhouse waste, biological treatment, kinetics 1380
 - sepiolite, milk processing, waste water, biological treatment, kinetics 1380
 - waste water treatment, biofilms, development, calcium 3344

Anaerobic digesters+sewage sludge, dewatering, driers 2356**Anaerobic digestion**

- abattoirs, waste water treatment, mathematical models, kinetics 3818
- activated sludge, photography, waste water, biological treatment 1691
- aerobic digestion, sewage sludge 1376
- aerobic treatment + anaerobic treatment, pH, control 336

Anaerobic digestion cont.

- agricultural wastes, UK 3348
- alkaline pulping, biological treatment, lignin, inhibition 1730
- animal wastes, biodegradation, pathogens, survival 290
- aromatic compounds
 - biodegradation
 - Haloanaerobium praevalens* 3277
 - Sporohalobacter marismortui* 3277
- bagasse, biodegradation, rumen microorganisms, methane production 2471
- banana waste, biodegradation, biogas, production 3391
- biological treatment, surfactants, biodegradation 2581
- bioreactors
 - sewage sludge, methane production 2352
 - wastes, methane production 2352
- brewery effluent, waste water treatment, kinetics 703
- cadmium, methane production, inhibition 3661
- cattle manure
 - gases, pressure, effects, mathematical models 3347
 - temperature 2684
- cattle slurry+rice straw, methane production 3803
- cattle slurry+wheat straw, methane production 3803
- coffee industry
 - wastes
 - growth media, production 3756
 - methane production 3756
- coir, biodegradation, biogas, production 3391
- efficiency
 - animal manures, mathematical models 1759
 - dairy wastes 3765
 - sewage sludge 2343
 - volatile fatty acids, indicators 3350
- Eichhornia crassipes*, utilization, biogas, production, methodology, kinetics 484
- EU regulations 3812
- farmyard manure, biodegradation, biogas, production, Czech Republic 1419
- fatty acids
 - biodegradation
 - Methanobacterium formicicum* 3600
 - Methanosarcina mazei* 3600
- fish industry, effluents, biological treatment, bacteria, methane, utilization 1761
- fluidized beds
 - fish
 - feeds
 - biodegradation, denitrification, volatile fatty acids 3714
 - volatile fatty acids, production 3805
- foaming, control, design, activated sludge 1385
- food wastes, methane, production, Korea Republic 3813
- fruit
 - processing, waste water, bioreactors, kinetics 436
 - wastes, mathematical models 3352
- granular sludge, production, waste water treatment, *Veillonella*, characterization 785
- heat treatment, sewage sludge 3346
- ice cream, production, waste water 701
- inhibition
 - ammonia, mathematical models 1384
 - hydrogen sulfide, mathematical models 1384
 - waste water treatment
 - ammonia 1381
 - chromium 1381
- initiation, microorganisms 433
- kinetics
 - isopropanol, biodegradation, mathematical models 1596
 - olive oil, waste water treatment 423

Anaerobic digestion cont.

- kitchen waste, Belgium 3354
- kraft mill effluent, organochloride compounds, biodegradation 728
- maize bran, biodegradation, rumen microorganisms, methane production 2471
- menstruation, products, biodegradation 653
- metals
 - cattle manure, methane production, India 1390
 - poultry manure, methane production, India 1390
 - whey, methane production, India 1390
- methane production
 - cattle manure 3806
 - dairy effluent, USA 1387
- methanol, biodegradation, *Methanosarcinaceae* 1566
- Nocardia*, techniques, estimation, immunofluorescence 1317
- olive oil
 - mills, waste water 2342
- production
 - waste water
 - control, bicarbonates 1389
 - kinetics 1382
 - temperature, kinetics 1668
- palm oil mill effluent 2289
- piggery effluent
 - Korea Republic 1769
 - straw 751
- polydimethylsiloxanes, inhibition 3318
- preacidification, coffee industry, waste water 1672
- refuse
 - methane production, enzymes 763
 - utilization, biogas, production, methodology, kinetics 484
- research, poultry, wastes, USA, reviews 756
- sewage
 - methane production 2354
 - struvite, production 1379
 - waste treatment, books 2798
- sewage sludge 425
 - anaerobes, conditions, effects 2351
 - Ascarissium*, removal 289
 - hydrolysis, nutrients, removal, Denmark 1606-1607
 - methane production, supports, sepiolite, effects 435
 - struvite, production 1379
 - toxic substances, biodegradation 524
 - Toxocara canis*, removal 289
 - viruses, *Giardia*, cysts 1780
- silage, biodegradation, methane production, mathematical models 3399
- silkworms
 - pupae
 - wastes
 - biogas, production 487
 - methane production 487
- sludges
 - anaerobes, conditions, effects 2351
 - application to land, reviews 3370
 - granules, activity 426
 - hydrolysis, nutrients, removal, Denmark 1606-1607
 - reviews 1170
 - struvite, production 1379
- starch, waste water 3603
- start-up, refuse, methane production 2344
- straw, piggery effluent, methane production 493
- sugarcane, washing, waste water, biological treatment, USA 712
- surfactants, biodegradation, methane production 1567
- tannery waste
 - heavy metals, uptake, algae 1586
 - methane production, kinetics 3390
 - temperature, vinasse, biodegradation 720
- textile industry, dyes, decolorization 1739
- tobacco, wastes, biodegradation, methane production 3393

Anaerobic digestion cont.

- tomatoes
 - processing
 - wastes
 - methane production 490
 - microorganisms, characterization 698
- 2,4,6-trichlorophenol, biodegradation, Eubacteriales 604
- vegetables, wastes, mathematical models 3352
- vinasse, biodegradation 718
- volatile fatty acids, biodegradation, inhibition, sodium 2347
- waste water
 - bentonite, supports 1233
 - biodegradation, models 1377
 - reviews 2349
 - sepiolite, supports 1233
 - talc, supports 1233
- waste water treatment
 - methane production, inhibition, sodium 2347
 - wheat straw, biodegradation, cellulose, pulp, production 551
- wastes
 - bentonite, supports 1233
 - methane production, assessment 439
 - sepiolite, supports 1233
 - talc, supports 1233
 - wey cheese, biodegradation, microorganisms, immobilization, supports 707
 - whisky, production, wastes 1675
 - zeolites, additives, biogas, production, pig slurry, Cuba 1422

Anaerobic digestion+pyrite, distillery effluent 1676**Anaerobic digestors**

- design, sewage sludge, treatment 428
- volatile fatty acids, biodegradation, kinetics, inhibition 489

Anaerobic treatment

- aerobic treatment
 - refuse, sewage sludge, composting, Austria 764
 - rotating biological contactors, nitrification, denitrification, sewage, Japan 2358
 - sewage sludge, bioreactors, redox potential, monitoring 1378
 - sludges, bioreactors, redox potential, monitoring 1378
- biogas
 - production
 - meatworks effluent, Germany 491
 - slaughterhouse waste, Germany 491
 - biological filtration
 - industrial wastes 2314
 - methane production, biomass, characterization 1269
 - seafoods, processing, waste water 2318
 - sugar refineries, waste water, Japan 719
 - waste water, synthetic, milk 1680
 - biological fixed-film systems, mathematical models 3272
 - biomass, supports, dimethyl terephthalate, production, waste water, biogas, production 1687
 - bioreactors
 - bacteria, polymers 1383
 - biofilms, scanning electron microscopy, inoculum 1222
 - ice cream, waste water, biodegradation, kinetics 2645
 - molasses distillers' solubles, biodegradation, Czech Republic 1679
 - particleboards, production, waste water 3275
 - piggery effluent, equations 753
 - sewage, biofilms, mathematical models 3274
 - starch, waste water, biodegradation 349
 - volatile fatty acids, biodegradation, waste water, methane production 2559

Anaerobic treatment cont.

- bioreactors cont.
 - waste water, biofilms, mathematical models 3274
 - yeasts, production, waste water 1671
- butyrate
 - biodegradation
 - bacteria, electron transfer 3469
 - methane production 2401
- carbon tetrachloride, biodegradation, substrates, ions 2460
- chlorinated hydrocarbons, biodegradation, bioreactors 3536
- chlorophenols, biodegradation, pH 597
- clams, processing, waste water 3757
- cotton waste, methane production, India 2665
- design, performance, costs, carbohydrates, waste water 1219
- 1,2-dichloroethylene, biodegradation, microbial flora, sewage sludge 2431
- drilling, emulsions, biodegradation, screening 3402
- effluents, reviews 429
- energy, production, plant residues, developing countries 3394
- flocculation, wool industry, effluents 737-738
- fluidized beds, waste water, control 1177
- heavy metals, removal, acid mine drainage, wetlands, USA 1358
- industrial wastes, biological treatment, bioreactors, sludges, composition, characteristics 3269
- inhibition, potassium, calcium, coffee, waste water 2345
- lagoons, biological filtration, sand, waste water, Morocco 2273
- methane production, wine distillery waste water, microorganisms, immobilization 482
- monitoring, wastes, gases, measurement 3271
- nitrophenols, removal, waste water, toxicity 599
- olive oil, production, waste water, preliminary treatment, aerobic conditions, microorganisms, effects 700
- optimization, distillery effluent 1678
- piggery effluent, bioreactors, methane production 1765
- plum, pickling, waste water 695
- ponds, sewage, methane production, Portugal 1375
- preliminary treatment, hardboard, laminated wood, production, waste water treatment, activated sludge 1717
- propionate, biodegradation, bacteria, electron transfer 3469
- pulp and paper industry
 - waste water
 - phenolic compounds, biodegradation 600
 - reviews 735
- pulp mill effluent
 - bisulfites, biogas, production 1718
 - organic sulfur compounds, toxicity, control 1721
 - waste water treatment 3776
- refuse, volatile fatty acids, production 2692
- sewage
 - biofilms, mathematical models 3273
 - bioreactors
 - Colombia 2285
 - Egypt 2285
 - microbial flora, characterization 2348
 - temperature 1226
 - volatile compounds, removal 2695
 - sewage sludge
 - bacteria, pellets, formation 430
 - granules
 - ammonium, removal, waste water 3705
 - phosphates, removal, waste water 3705
 - sludges, granules, strength, wastes 3276
 - starch, biodegradation, microorganisms, chemical properties, effects 3602
 - sugar factory waste 722

Anaerobic treatment cont.

- sugar industry, waste water, yeasts, immobilization, ethanol production 721
- thermophilic microorganisms, sludges, biological treatment, Denmark 1774
- vinasse, biodegradation 2647
- waste treatment, sequencing batch reactors 2288
- waste water
 - biofilms, mathematical models 3273
 - bioreactors 348
 - aggregates, bacteria, distribution 2742
 - microorganisms
 - aerobes 3257
 - anaerobes 3257
 - microbial flora, characterization 2348
 - sulfates, reviews 2638
 - waste water treatment 1231
- wastes
 - pathogens, inactivation, temperature 2241
 - reviews 1220
- Anaerobic treatment + crossflow**
 - sewage, microfiltration 1218
 - waste water, microfiltration 1218
- Anaerobic treatment + sodium hypochlorite**, pulp mill effluent, decolorization 1720
- Anaerobic treatment + ultrafiltration**, pulp mill effluent, organochlorine compounds, removal 2655
- Analytical methods**, estimation, microorganisms, biomass, soil, reviews 812
- Anchovies**, bacteria, histamine, production, enzyme activity, Spain 119
- Ancient monuments**
 - biodeterioration
 - bacteria, Spain 2116
 - climatic change, Italy 2114
 - fungi, Spain 2116
- Ancyclobacter aquaticus**
 - 2-Chloroethylvinylether, biodegradation, techniques, isolation 3503
 - sulfate pulping, effluents, organochlorine compounds, removal 2417
- Aniline**, biodegradation, *Pseudomonas*, isolation, characterization 783
- Animal manures**
 - anaerobic digestion, efficiency, mathematical models 1759
 - bacteria, isolation, hepatitis A virus, biological control, USA 3083
 - biodegradation, *Thermoactinomyces*, isolation, culture media 1825
 - fumonisin, detection 895
 - ponds, algae, growth, water pollution 2683
 - waste treatment
 - biological filtration
 - biofilms 3267
 - bioreactors 3267
- Animal wastes**
 - biodegradation, anaerobic digestion, pathogens, survival 290
 - biogas, production, pathogens, removal, indicator species, bacteria, Denmark 1760
 - composting 1249
 - USA 1235, 1251
- Anisakidae**
 - sashimi, contamination, USA 940
 - sushi, contamination, USA 940
- Antarctica**
 - diesel oil, polluted soils, bioremediation 3229
 - fuel oils, polluted soils, bioremediation 3229
 - organic compounds, biodegradation 3443
- Anthracene**, biodegradation, *Bjerkandera*, species, characterization, optimization 3561
- Anthracite waste**, polluted soils, biological treatment, rotating biological contactors 3459
- Antibacterial agents**
 - comparisons
 - food
 - Gram negative bacteria, isolation 44

- Antibacterial agents cont.**
 comparisons cont.
 food cont.
 Yersinia enterocolitica, isolation 44
 plant oils
 Thymus vulgaris
 Salmonella typhimurium, control 1051
 Staphylococcus aureus, control 1051
 production, foods, lactic acid bacteria 232
 protamine, fish products, microbial contamination, control 1892
- Antibacterial properties**
 cod, *Enterococcus faecium* 1066
 pyrophosphates, poultry, carcasses, chilling, *Salmonella*, control 2988
 sponges, *Listeria*, control 2137
- Antibiotic resistance**
Acidiphilium cryptum
 gene expression 3845
 gene transfer 3845
Pseudomonas aeruginosa, water systems, isothiazolone, treatment, culture media 1028
- Antibiotics**
Escherichia coli, resistance, milk products, contamination, Iran 2996
 pathogens, biofilms, control, instruments, medical treatment, microbial contamination, evaluation 3021
 resistance
 catheters, silicon, contamination, *Candida* 3020
 crustacea 3056
 fish 3056
 pigmeat, *Streptococcus* 1112
 sewage, ponds, *Salmonella*, Morocco 3162
 sewage effluent disposal
 sea water, coastal areas,
 Pseudomonas aeruginosa, plasmids, Spain 3155
 shellfish, coastal areas,
 Pseudomonas aeruginosa, plasmids, Spain 3155
 water, *Streptococcus* 1112
Shigella dysenteriae
 control
 fish, contamination, India 2962
 seafoods, contamination, India 2962
 solutions, aerosols, microbial contamination, bacteria 2098
 vegetables, bacteria, control, resistance 2005
- Antifouling agents**
 fish farms, biofouling, control, Malaysia 3041
 production
 Bipolaris 2134
 Dendronephthya, biofouling, *Mytilus edulis*, control 221
- Antifungal agents**, production, *Trichoderma*, wood destroying fungi, control 2104
- Antimicrobial agents**, food, preservation, books 2799
- Antimicrobial activities**
 chlorine dioxide, drinking water 3073
 ozone, drinking water 3073
- Antimicrobial activity**, *Staphylococcus xylosus*, sausages, *Listeria monocytogenes*, control 988
- Antimicrobial properties**
 characterization, *Lactobacillus acidophilus*, bacteriocins, production 1061
 foods, phosphates, models, *Staphylococcus aureus* 1043
 β -lactams
 Enterobacteriaceae, determination 1050
 Pseudomonas, determination 1050
 phosphates, meat products, microbial contamination, reviews 2971
Staphylococcus aureus, polyphosphates 1045
- Antimicrobial properties cont.**
 vegetable juices
 carrots
 Listeria monocytogenes
 pH 1031
 sodium chloride 1031
 temperature 1031
- Antioxidants**
 production
 Aspergillus oryzae
 characterization 2760
 purification 2760
 Aspergillus sojae 2761
- Antracenes**, biodegradation, polluted soils, bioreactors 323
- Apple juice**
 fermentation
 Saccharomyces cerevisiae, ethanol production 3376
 Zymomonas, ethanol production 3376
- Apple pomace**
 proteins, enrichment, cellulolytic moulds + yeasts, culture techniques 2371
 utilization
 Aspergillus, β -fructofuranosidase, production 3384
 Aspergillus niger
 cellulase, production 2487
 xylanase, production 2487
 Trichoderma viride
 cellulase, production 2487
 xylanase, production 2487
- Apples**
 cellulose, biodegradation, *Trichoderma viride*, enzymes, xyloglucans, effects 2951
 postharvest decay, *Penicillium expansum*, control, calcium 928
 storage decay
 Botrytis cinerea 106
 fungi, biological control + *Bacillus* 2006
 Penicillium 106
- Application to land**
 anaerobic digestion, sludges, reviews 3370
 ecosystems, toxicology, linear alkylbenzene sulfonate, biodegradation, sewage, treatment, Spain 3639
 pig slurry, microbial contamination, water, indicator species 2223
 sewage
 biological treatment, China 3369
 composting, reviews 351
 sewage effluent 451
 sewage sludge, Canada 1399
 sewage sludge disposal, Germany, reviews 2691
 sludges, *Salmonella*, bacterial count, enumeration, comparisons 1907
 waste water
 biological treatment, review 1169
 groundwater, microbial contamination, indicator species, bacteria, Spain 1123
 waste water treatment, urban areas, China 2364
 wastes, composting, reviews 351
- Aquatic environment**
Chelatobacter heintzii, distribution 3836
Chelatococcus asaccharovorans, distribution 3836
 nonionic surfactants, biodegradation 2579
 sewage effluent disposal, Europe 3361
 toxic substances, biodegradation, bioremediation 314
 wood, biodegradation, biofilms, enzyme activity, Australia 2479
- Aquatic plants**
 comparisons, lagoons, wetlands, constructed, Australia 1341
 growth, control, plastics, lakes 1122
 heavy metals
 removal, waste water 1844
 uptake 1578
 landfill leachates, biological treatment, wetlands, constructed 1360
 nitrates, removal, wetlands, New Zealand 1345
 nutrients, levels, rivers 1604
- Aquatic plants cont.**
 phosphorus, removal, drains, wetlands, Australia 1346
 pollution control, wetlands, constructed, USA 1347
 pulp mill effluent, biological treatment 1357
 reed beds, bioremediation, reviews 1843
 selection, sewage, biological treatment, wetlands, constructed 1339
 waste water, biological treatment, Morocco 1362
- Aquifers**
 aromatic hydrocarbons, biodegradation, bioremediation, USA 562
 chlorinated hydrocarbons, biodegradation, anaerobic conditions, USA 2506
 microbial contamination, Poland 859
 petroleum hydrocarbons, biodegradation 563
 pollution, bioremediation, *Pseudomonas*, USA 1162
 recharge, sewage effluent, Israel 3389
 sand, heavy metals, removal, bacteria, polymers 645
 soil, styrene, biodegradation 576
 tetrachloroethane, biodegradation, microbial flora, fatty acids, effects 1453
 vinyl chloride, transformation, microorganisms, assessment 3457
 waste water, heavy metals, bioremediation, Mexico 3216
- Arab countries**
 fuel oils
 biodegradation
 polluted soils
 bioremediation
 actinomycetales 2502
 cyanobacteria 2502
 fungi 2502
 oil refinery wastes
 biodegradation
 polluted soils
 bioremediation
 actinomycetales 2502
 cyanobacteria 2502
 fungi 2502
- Arabinose**, biodegradation, hydrogen, production, *Clostridium* 1478
- Arbutin**, repression, *Listeria monocytogenes*, listeriolysin, expression 258
- Archaea**
 carbohydrates, fermentation, marine environment, USA 514
 proteins, fermentation, marine environment, USA 514
- Arcuadendron**, flocculants, production 3870
- Argentina**
 beef, cooking, temperature, aphthovirus, survival 2042
 sewage
 Vibrio cholerae, isolation 2182
 Vibrio metschnikovii, isolation 2182
 wine making, yeasts, biodeterioration 918
- Arid soils**, cellulose, biodegradation, fungi, isolation, Algeria 1830
- Aromatic acids**, biodegradation, *Pseudomonas putida* 2662
- Aromatic compounds**
 biodegradation
 Alcaligenes, genetic engineering 2439
 anaerobic digestion
 Haloanaerobium praevalens 3277
 Sporohalobacter marismortui 3277
 environment, aerobes + anaerobes, bioremediation 2268
 harbours, sediment, USA 1161
 microorganisms
 isolation, identification 3406
 USSR, reviews 2440
 Phanerochaete chrysosporium
 enzymes
 characterization 508
 purification 508
 soil
 slurries
 Pseudomonas acidovorans 3460
 Pseudomonas aeruginosa 3460

Aromatic compounds cont.

- biodegradation cont.
- soil cont.
- slurries cont.
- Pseudomonas cepacia* 3460
- Pseudomonas ruhlandii* 3460
- Trichosporon cutaneum* 571
- halogens, biodegradation, heavy metals, resistance, *Alcaligenes eutrophus*, characterization 3502
- removal, waste water, biological treatment + ozone 3458
- utilization, coal, solubilization, *Penicillium simplicissimum* 1755

Aromatic hydrocarbons

- biodegradation 1511
- aquifers, bioremediation, USA 562
- bacteria 1506
- anaerobic conditions 2513
- interactions 2523
- coal tar, contaminated land 2676
- coke, wastes, microorganisms, surfactants, bioremediation 3800
- fungi 1506
- microorganisms
- biofilms, kinetics 3201
- bioremediation, soil 3494
- polluted soils 322
- techniques, screening 1847
- Mycobacterium vaccae*, groundwater, pollution 3496
- Phanerochaete chrysosporium* 1510
- Pleurotus eryngii*, hydrogen peroxide, production, alcohol oxidoreductases 582
- polluted soils
- bioreactors 323
- pretreatment, enhancement 3550
- Pseudomonas*, enzyme activity, gene amplification 2505
- Pseudomonas putida*, genetics 3556
- Rhodopseudomonas palustris*, hydrogen, production 581
- soil
- Flavobacterium* 3566
- microbial flora 1491
- Pseudomonas aeruginosa* 3566
- Pseudomonas putida* 3566
- Sphingomonas*
- characterization 3183
- identification 3183
- yeasts 1506
- chlorine
- biodegradation
- bioreactors
- anaerobic treatment
- Dechlorosporium hafniense* 2530
- Desulfomonile tiedjei* 2530
- desulfurization, *Rhodococcus*, genes, techniques, identification, genes, cloning 3570
- groundwater, bioremediation, bioreactors 1515
- lignin, biodegradation, *Pycnoporus coccineus* 2493
- oxidation
- Penicillium janthinellum* 3567
- Syncephalastrum racemosum* 3567
- polluted soils, bioremediation 3236
- utilization
- bacteria, bioassays, evaluation 1513
- Rhodococcus rhodochrous*, pyrocatechol, production 570

Aromatic sulfonic acids, biodegradation, *Pseudomonas maltophilia* 497**Arsenic**

- oxidation, *Thiobacillus ferrooxidans*, iron, pyrites, effects 2608
- production, minerals, arsenopyrite, oxidation, *Thiobacillus ferrooxidans* 2613
- resistance
- iron, oxidation, *Thiobacillus ferrooxidans*, genetics engineering, plasmids 3854
- sewage effluent disposal
- sea water, coastal areas, *Pseudomonas aeruginosa*, plasmids, Spain 3155

Arsenic cont.

- resistance cont.
- sewage effluent disposal cont.
- shellfish, coastal areas, *Pseudomonas aeruginosa*, plasmids, Spain 3155

Arsenopyrite, oxidation, *Thiobacillus ferrooxidans* 3793**Arthospira**

- biogas
- carbon dioxide, removal 483
- hydrogen sulfide, removal 483

Arthrobacter

- naphthalene, biodegradation, solubility, chemical properties 3560
- pentachlorophenol
- biodegradation
- clay soils 596
- sand 596
- quinolines, biodegradation 560
- sodium acrylate, biodegradation 2560

Arthrobacter globiformis, sterols, fermentation, steroids, production 1412**Arthrobacter simplex, sterols, fermentation, steroids, production 1412****Arthrogaphis, agricultural byproducts, saccharification, cellulase 2470****Arthropods, flour mills, machinery, contamination, distribution 2936****Ascarissuum, removal, sewage sludge, anaerobic digestion 289****Ascophyllum nodosum, heavy metals, uptake, alginates, leaching, effects 1574****Asia**

- feeds, contamination, mycotoxins 62
- foods, contamination, mycotoxins 62

Asparagus, pulps, *Clostridium sporogenes*, heat resistance, citric acid 101**Aspergillus**

- apple pomace, utilization, β -fructofuranosidase, production 3384
- books 2805
- growth, tomato juice, contamination, models 94
- lignocellulose, biodegradation, isolation 2488
- maize, storage, microbial contamination, aflatoxins, Brazil 2934
- medium chain fatty acids, biodegradation 2558
- melons, microbial contamination, control 1926
- nickel ore, microbial leaching 1418
- parchment, biodeterioration 3005
- rock phosphate, solubility, soil alkalinity 1591
- triacylglycerols, biodegradation 2558
- xylanases, production, characterization, India 2764

Aspergillus aculeatus + enzymes, cellulase, gene expression, *Saccharomyces cerevisiae* 2766**Aspergillus awamori, aerobic treatment, distillery effluent, Japan 2642****Aspergillus awamori var. kawachi, distillery effluent, biodegradation, single cell protein, production 463****Aspergillus candidus, mushroom compost, fermentation, feeds, production 3377****Aspergillus carbonarius**

- phytase, production, surfactants 1401
- rape, oils, production, phytic acid, hydrolysis 1401

Aspergillus clavatus

- maize, food grains, biodeterioration 902
- wheat, food grains, biodeterioration 902

Aspergillus flavus

- aflatoxin, production, control, essential oils 65
- aflatoxins
- biosynthesis, genes, gene expression 2858
- groundnuts, Israel 86
- production
- cheeses 706
- whey 706
- cigarettes, mycotoxins, Egypt 912
- cotton, contamination, aflatoxins, Slovakia 1011

Aspergillus flavus cont.

- groundnuts
- aflatoxins, production, control, sodium chloride 2939
- products, aflatoxins 910
- maize
- aflatoxins, production, control, plant oils 63
- kernels, aflatoxins, production 1974
- Aspergillus flavus var. columnaris, cigarettes, mycotoxins, Egypt 912**
- Aspergillus fumigatus**
- cigarettes, mycotoxins, Egypt 912
- composts, health hazards 3173
- mycotoxins, composting, health hazards 2308
- p-cresol, biodegradation, biochemical pathways 3497
- phenols, metabolism 2544
- plant residues, utilization, proteins, production 554
- sugarcane trash, utilization, proteins, production 554
- Aspergillus nidulans**
- maize, food grains, biodeterioration 902
- wheat, food grains, biodeterioration 902
- Aspergillus niger**
- apple pomace
- utilization
- cellulase, production 2487
- xylanase, production 2487
- cellulase
- characterization 2762
- production, rice straw, biodegradation 3532
- cigarettes, mycotoxins, Egypt 912
- Crotalaria juncea*, retting 1462
- enzymes, lactose, fermentation, genetic engineering 3766
- feeds, ochratoxin-A, production 2927
- β -ionone, biodegradation 2423
- lignocellulosic wastes, biodegradation, ethanol production 3532
- onions, storage decay, India, Karnataka 110
- poultry fat, hydrolysis 2681
- pyrene, biodegradation 2517
- silver, sorption 2615
- species, identification 1937
- sugarcane bagasse, biodegradation, citric acid, production 467
- tallow, hydrolysis 2681
- timbers
- decay
- Gloeophyllum sepiarium*, control 185
- Pleurotus ostreatus*, control 185
- vinasse, utilization, biomass production 715
- wheat bran, biodegradation, fermentation, mathematical models 544
- xylanase
- production 1827
- rice straw, biodegradation 3532
- Aspergillus ochraceous, mycotoxins, production 2925**
- Aspergillus ochraceus**
- feeds, identification, polyclonal antibodies 1888
- foods, identification, polyclonal antibodies 1888
- plant residues
- biodegradation
- xylanase, production 2376
- β -xylosidase, production 2376
- rice straw, biodegradation, ethanol production 2388
- Aspergillus oryzae**
- antioxidants
- production
- characterization 2760
- purification 2760
- galactoglucomannans, biodegradation, enzymes 538
- Aspergillus parasiticus**
- aflatoxin, biosynthesis, reduction, activity 2859
- aflatoxins
- production
- control, food preservatives 64
- genetics 1962

Aspergillus parasiticus *cont.*

- groundnuts
- aflatoxins
- control
 - modified atmosphere storage 909
 - packaging 909
- gypsum, aflatoxins, production 87
- products, aflatoxins 910

Aspergillus phoenicis, sugarcane bagasse, fermentation, cellulase, production 3510**Aspergillus sojae**, antioxidants, production 2761**Aspergillus tamerii**, polyethylene, biodegradation 2561**Aspergillus terreus**

- β -glucosidase, production 2757
- phenols, biodegradation 1525

Aspergillus usami *mut. shirousami*, protease, production, distillery wastewater, Japan 468**Aspergillus versicolor**, biomass, *Pinus sylvestris*, determination, ergosterol 3004**Asterias amurensis**, wastes + wood residues, composting 371**Atrazine**

- biodegradation
 - Pleurotus pulmonarius*, metabolites 3624
- Rhodococcus*
 - biochemical pathways 3620
 - genetic analysis 3619
- soil
 - bacteria 630
 - Phanerochaete chrysosporium* 2572
- surface water, bacteria 621
- water
 - bacteria 630
 - Pseudomonas fluorescens* 1558
- wetlands
 - sediment
 - aerobic conditions, USA 2649
 - anaerobic conditions, USA 2648

Aulosira fertilissima

- pesticides
 - biodegradation 619
 - utilization 619

Aureobasidium, pullulan, production, maize byproducts 2382**Aureobasidium pullulans**

- cherries, postharvest decay 107
- enzymes, pentosan, removal, sulfite pulping 1722
- whey, utilization, proteinases, production, characterization 710
- xylanase, characterization 3871

Aureobasidium pullulans *enzymes*, xylan, biodegradation, sulfite pulping 3775**Aureococcus anophagefferens**, algal blooms, nitrogen, effects, USA 3152**Australia**

- New South Wales
 - nutrients
 - removal
 - rivers, wetlands, constructed 1348
 - sewage effluent
 - biological treatment, wetlands 1364
 - wetlands 1351
 - sewage effluent, biological treatment, wetlands, lagoons 1350
 - Northern Territories, refuse, composting 3282
 - South Australia, cooling towers, *Legionella*, control, biocides 2158
 - acid mine drainage, biological treatment, wetlands 1359
 - activated sludge
 - fungi, properties 394
 - Nocardia pinensis*, morphology, variation 395
 - algal blooms, waterways, economics, externalities 3140
 - bioremediation
 - mine spoil 3217
 - mine tailings 3217
 - mined land 3217

Australia *cont.*

- coke, ovens, waste water, biological treatment, activated sludge, oxygen + biological filtration 3801
- composts, utilization, reviews 3295
- diesel oil, oil spills, bioremediation, bioventing 3241
- foods, composting, design 1246
- lagoons, wetlands, constructed, aquatic plants, comparisons 1341
- mangoes, processed products, microbial contamination, coliform bacteria 2949
- nutrients, removal, activated sludge, upgrading 1609
- petroleum hydrocarbons, biodegradation, groundwater 3222
- Phanerochaete chrysosporium*, growth, temperature, pH, effects 3877
- phosphorus, removal, aquatic plants, drains, wetlands 1346
- runoff, treatment, wetlands, constructed 1342
- Salmonella enteritidis*, plasmids, analysis 1879
- sea water, coastal areas, water pollution, bacterial count 3150
- sewage
 - biological treatment
 - wetlands
 - constructed 1336
 - water depths, effects 1344
 - sewage effluent disposal, beaches, swimming, waterborne diseases, surveys 2832
 - slaughterhouse waste, composting, design 1246
 - wood, biodegradation, biofilms, enzyme activity, aquatic environment 2479

Austria

- culinary herbs, microbial flora 1987
- organic wastes, composting 3293
- refuse, sewage sludge, composting, anaerobic treatment, aerobic treatment 764
- sewage, biological treatment, activated sludge, updating, design, performance 1293
- spices, microbial flora 1987

Autotrophic microorganisms, kinetics, waste water, biological treatment 1632**Averrhoa carambola**

- fruit juices
 - preservation
 - sodium benzoate, keeping quality 921
 - sodium bisulfite, keeping quality 921
 - sodium sorbate, keeping quality 921

Azo compounds

- biodegradation
 - aerobic treatment, rotating biological contactors, biofilms 1597
 - bacteria, reviews 1598
 - fungi, reviews 1598
 - helminths, reviews 1598
 - Phanerochaete chrysosporium* 736
 - peroxidases 1449
 - Pseudomonas stutzeri* 525
 - Streptomyces chromofuscus*, peroxidases 1449
 - waste water, microorganisms 1446
- decolorization, *Phanerochaete chrysosporium*, pretreatment 3409

Azotobacter chroococcum

- 2,4-D, residues, biodegradation, soil 631
- growth
 - olive oil, production, waste water, biological treatment, Spain 2639
 - phenolic compounds, biodegradation, soil 1522
- nickel, metabolism, genetics 642
- olive oil, waste water, utilization, polyhydroxybutyrate, production 2380

Azotobacter vinelandii

- dihydrogen, oxidation, genetics 2739
- polyhydroxybutyrate, production, culture media 3611

Bacillariophyta, blooms, marine environment, Japan 2231**Bacillus**

- biopolymers, production 2733
- bread, spoilage, differentiation 1981
- cellulose, biodegradation, soil, termites, infestation 3527
- composts, isolation, cellulase, production 1784
- control, *Listeria monocytogenes* 3080
- foods, enumeration, culture media 3100
- fruit juices, microbial contamination 1997
- growth, characteristics, fruit juices 1998
- hemicellulose, biodegradation, soil, termites, infestation 3527
- methylene blue, decolorization 2666
- petroleum, microbial contamination 3008
- recovery, raw milk, techniques, heat treatment, culture techniques 158
- soil, isolation, cellulase, production 1784
- xylanase, characterization 2727

Bacillus amyloliquifaciens, enzymes, proteases, hides and skins, hair, removal 2667**Bacillus cereus**

- bacteriocins 3085
- cell growth, inhibition, fatty acids 1048
- control
 - meat, gamma radiation 222
 - poultry meat, gamma radiation 222
- crumpets, toxins, production, control, nisin 2155
- enterotoxins
 - heat stability 1952
 - production
 - detection, immunoassay, comparisons 57
 - sucrose, hydrogen ions 887
- enumeration
 - feeds, standards 1
 - foods, standards 1
- foods
 - enterotoxins, detection 2920
 - isolation, culture media 1895
 - reviews 3118
- heat resistance, spores, germination 2190
- inhibition
 - Lactobacillus acidophilus*, bacteriocins 1061
 - protamines 1034
- isolation, animal manures, composts, oleic acid, biodegradation 2438
- orange juice, enterotoxins 95
- resistance, water systems, microbial contamination, biocides, control 2133
- sashimi, contamination, USA 940
- spoilage, chicken meat, carcasses, cold storage 2909
- spore germination, inhibition, fatty acids 1048
- spores
 - food safety, sporulation, culture media, temperature, effects 2827
 - germination, foods, determination 2837
 - heat resistance, recovery, conditions, effects 2194
 - inhibition
 - fatty acids 1033
 - glyceryl monododecanoate 1033
 - temperature resistance, relative humidity 1088

- sushi, contamination, USA 940
- toxins, reviews 1953
- xylanase, production, genetic engineering 2726

Bacillus circulans

- chitin, biodegradation, chitinase, biochemistry 607
- sugars, utilization, xylanase, production 608
- xylan, utilization, xylanase, production 608

Bacillus firmus, starch, biodegradation, transferases, production 2568**Bacillus licheniformis**

- biosurfactants, production, culture media, optimization 1551

Bacillus licheniformis cont.

- denitrification
 - kinetics
 - ammonium 2622
 - oxygen 2622
- lichenysin A, production, salinity 3638
- poultry
 - feathers, biodegradation, keratinase 756
 - hair, biodegradation, keratinase 756
 - skin, biodegradation, keratinase 756
- transport processes, porous media 788

Bacillus macerans, cheeses, histamine, production 1009**Bacillus pabuli**, chitin, biodegradation, chitinase, assays 823**Bacillus pasteurii**

- mercury
 - biodegradation 1577
 - reduction 2594
- organomercury, biodegradation 1577

Bacillus polymyxa

- cellulase, characterization 2728
- enzymes, xylan, biodegradation 2704

Bacillus pumilus, control, drinking water, disinfection, ultraviolet radiation 2159**Bacillus stearothermophilus**

- coffee, beverages 219
- control, heat treatment, mathematical models, kinetics 877
- emulsifiers, production 3647
- lignin, biodegradation, arabinofuranosidase, characterization 3834
- spores
 - heat resistance
 - models 249
 - mushrooms, canned products, brine, acidification, control 925
 - heat stress
 - culture media
 - calcium 1111
 - magnesium 1111
 - inhibition, pressure treatment 219
- xylan
 - biodegradation
 - xylanase, genes, identification, identification 3901
 - β -xylosidase, genes, identification, identification 3901
 - xylanase, nucleotide sequences 3844

Bacillus subtilis

- acetoin, production, petroleum hydrocarbons, emulsions, biodegradation 1159
- control
 - drinking water, disinfection, ultraviolet radiation 3072
 - microwave radiation 2142
- copper, adsorption, cell walls, binding, efficiency 1158
- Crotalaria juncea*, retting 1462
- enzymes
 - cellulase, production, detection, SDS-PAGE 1785
 - characterization, composts 2707
 - galactoglucanases, biodegradation, mannanases 533
 - heavy metals, removal 3660
 - mannanase, production, coconuts, waste, carbohydrates, mannans, utilization 2383
- spores
 - heat resistance, kinetics, oils 1882
 - survival, freeze-drying, genetics 3049
- xylanase
 - gene expression 1806
 - gene transfer 1806

Bacillus thermoglucosidasius, isolation, sewage sludge, esterases, production 792**Bacillus thuringiensis-cereus**, glycerol trinitrate, biodegradation 3456**Bacon**, *Clostridium botulinum*, control, sodium nitrite 2978**Bacteria**

- acetates, production, reviews 1799

Bacteria cont.

- Acinetobacter* strains
 - biological competition
 - chloroalkanes, biodegradation, biological filtration, bioreactors, aerobic conditions 3491
 - chlorobenzenes, biodegradation, biological filtration, bioreactors, aerobic conditions 3491
 - acrylonitrile, production, effluents, biodegradation 2410
- activated sludge
 - ammonia, nitrification, polluted water, sea water 402
 - characterization, RNA probes 1155
 - fatty acids esters, biodegradation 2424
 - flocs, structure 3321
 - foaming, control 1320
 - monitoring 2254
 - sodium anthraquinone sulfonate, biodegradation 512
- adhesion
 - control, catheters, silver 2126
 - mechanisms, meat, surfaces, reviews 2973
- Adriatic Sea 3090
- aerosols, antibiotics, solutions, microbial contamination 2098
- aldehydes, reduction, identification 3423
- algae, interactions, diclofop, biodegradation 623
- alkanes, biodegradation, surfactants, production, lipids 1792
- anaerobic conditions, cresols, biodegradation 3578
- anaerobic digesters, methane production, temperature 431
- anchovies, histamine, production, enzyme activity, Spain 119
- ancient monuments, biodeterioration, Spain 2116
- aromatic hydrocarbons
 - biodegradation 1506
 - anaerobic conditions 2513
 - interactions 2523
 - utilization, bioassays, evaluation 1513
- Arthrobacter* strains
 - biological competition
 - chloroalkanes, biodegradation, biological filtration, bioreactors, aerobic conditions 3491
 - chlorobenzenes, biodegradation, biological filtration, bioreactors, aerobic conditions 3491
- associations, wood borers, isopoda, marine environment, Egypt 3820
- atrazine
 - biodegradation
 - soil 630
 - water 630
- azo compounds, biodegradation, reviews 1598
- bacterial count, activated sludge, techniques, assessment 1303
- bacteriocins, ubiquinones, marine fouling, *Balanus amphitrite*, larvae, settlement, control 2176
- bauxite, aluminium, extraction 3796
- beef, vacuum packaging, amines, production 969
- biodegradation
 - plasmids, transfer, polluted soils, Czech Republic 3833
 - sewage sludge, carboxylic acids, production, aerobic treatment 341
- biofilms
 - biofouling, reviews 3039
 - denitrification, biological fixed-film systems, operation 3861
 - determination, bacterial count, isopropyl cinodine, nalidixic acid, effects 3907
 - properties, characteristics 1216

Bacteria cont.

- biofilms cont.
 - stainless steel, surfaces, isolation 1023
- biphenyl, biodegradation, characterization, soil, pollution 3484
- butanediol, production, fermentation, reviews 2473
- butyrate, biodegradation, anaerobic treatment, electron transfer 3469
- carbazole
 - biodegradation
 - biphenyl 2,3-dioxygenase 3507
 - naphthalene 1,2-dioxygenase 3507
- carbafuran, biodegradation, soil, techniques, isolation, phenotypic stability 1562
- carrageenan, estimation 885
- cellulose, biodegradation, landfills, wastes, differentiation 3509
- characteristics, phosphorus, removal, activated sludge, aerobic treatment, anaerobic treatment 1302
- characterization, pollution, oil refinery wastes, bioremediation, Germany 3209
- cheeses
 - determination, Spain 2088
 - microbial contamination 178
- chitin, biodegradation, chitinase, assays 823
- chlorinated ethenes, biodegradation, groundwater, reviews 3482
- chlorinated hydrocarbons, utilization, bioassays, evaluation 1513
- 4-chloro-2-methylphenol, biodegradation, characterization 2542
- chromium, reduction 3828
- coal, hydrogenation 748
- colonization, monitoring, pigmeat, microscopy 35
- composts, enumeration, identification, Canada 2296
- consortia, oleic acid, biodegradation 3500
- consortium, polychlorinated biphenyls, biodegradation 595
- contamination, chlorine dioxide, control, cucumbers, water, cooling 2952
- control
 - foods, microbial contamination, tannins 3099
 - semolina, irradiation, storage life, extension, India 1037
- sewage effluent
 - chlorine 3170
 - disinfection
 - chlorine + peracetic acid 3076
 - ultraviolet radiation, USA 2693
 - ozone 3170
- stonework, biodeterioration, biocides, UK 3013
- vegetables
 - antibiotics, resistance 2005
 - disinfectants, resistance 2005
 - water, disinfectants, synergism 224
- cooling systems, water, blockage, chromium, reduction 2132
- Corynebacterium*, polyesters, biodeterioration, esterase 1019
- cultures
 - chloroallyl alcohols, biodegradation, waste water treatment 1437
 - sulfonates, biodegradation 2584
- 2,4-D, biodegradation, phosphorus, rivers, Egypt 1563
- denitrification
 - enzymes, entrapment, glass 2722
 - reviews 1648
- desiccation, resistance, air conditioners, air quality 2823
- dessication, survival, farm buildings, surfaces 3027
- dibenzothiophene, desulfurization 3407
- 1,2-dichloroethane, biodegradation, bioreactors, granular activated carbon, regeneration 1272
- 2,4-dinitrophenol, biodegradation, activated sludge, techniques, enumeration 1537
- diphenyl methane, hydrogenation 748

Bacteria cont.

- distribution, waste water, anaerobic treatment, bioreactors, aggregates 2742
- diversity, genetically engineered microorganisms, soil 800
- drinking water
 - bioassays 2181
 - biodegradation, isolation, detection, comparisons 855
 - denitrification, identification, isolation 2848
 - β galactosidase, activity, isolation 1913
- drying, survival 1809
- dyes, biodegradation, reviews 1598
- endotoxins, structure activity relationships, reviews 892
- enzymes
 - cellulose, biodegradation 2469
 - inhibition, paint, trybutyltin 3856
- filamentous
 - activated sludge, techniques, identification, isolation, micromanipulation 1299
 - phenotypes, activated sludge 1820
- filaments
 - activated sludge, bulking, foaming, design, control 1313
 - formation, nutrients, removal, activated sludge, reviews 1312
- fish farming, feeds, biodegradation 900
- foods, detection 1958
- formaldehyde, transformation 3471
- fumarate, hydrogenation 748
- furfural, biodegradation 1707
- genes, polychlorinated biphenyls, biodegradation, rivers, sediment, Germany 3199
- genetic analysis, polymerase chain reaction + restriction fragment length polymorphism 3900
- glyphosate, biodegradation, biochemical pathways 3629
- Gram negative bacteria
 - poly(3-hydroxyoctanoic acid) biodegradation
 - poly(3-hydroxyoctanoic acid) depolymerase
 - enzyme activity 3613
 - synthesis 3613
- Gram positive bacteria
 - poly(3-hydroxyoctanoic acid) biodegradation
 - poly(3-hydroxyoctanoic acid) depolymerase
 - enzyme activity 3613
 - synthesis 3613
- granules
 - brewery effluent, biological treatment, anaerobic digesters, design 1663
 - maize, processing, waste water, biological treatment, anaerobic digesters, design 1663
- groundwater, nitrates, removal, USA 3719
- growth
 - activated sludge
 - bulking 1311
 - nutrients 3316
 - DDT, biodegradation, soil, humic acids, effects 628
 - inhibition, detection, culture media 2780
 - iron, oxidation 3837
 - kinetics, water 28
 - models, kinetics 3116
 - phenol, biodegradation, models 3580
 - ponds, biological treatment, organic carbon, effects 413
 - water distribution, pipes, techniques, monitoring, bacterial count 2895
- halogenated hydrocarbons, biodegradation, biochemistry, kinetics 3453
- halophiles, phenols, biodegradation, waste water, saline water, oilfields, biological treatment, bioreactors, USA 1694
- heat resistance, fish products, spoilage, control, pasteurization 2017
- heavy metals, removal, sewage sludge 2597

Bacteria cont.

- herbicides, biodegradation, soil, tillage 611
- ice, water quality, determination 2885
- immobilization
 - brine, wastes, nitrates, removal 3720
 - poly(vinyl alcohol), gels, drinking water, denitrification 3710
- immobilization mathematical models, dynamic models, nitrification, waste water treatment 3725
- indicator species, water, quality, monitoring, assays 27
- inoculation
 - activated carbon, water purification, triazine herbicides, biodegradation 3631
 - soil, genetically engineered microorganisms, reviews 801
- insecticides, biodegradation, soil, tillage 611
- interactions
 - bottled water, packaging materials, Italy 2886
 - chlorinated biphenyls, biodegradation 592
 - chlorobenzoates, biodegradation 592
 - Listeria monocytogenes*, biofilms, growth 1095
 - propionates, oxidation, sludges, anaerobic treatment 2737
- iron
 - citrate, complexes, biodegradation 3675
 - oxidation, minerals, biodegradation, reviews 3791
 - reduction
 - minerals, biodegradation, reviews 3791
 - plutonium oxide, solubilization 1576
- isolation
 - animal manures, hepatitis A virus, biological control, USA 3083
 - bioreactors, sludges, methyl *t*-butyl ether, biodegradation 3543
 - compost, hydroxystearic acid, production 3831
 - herrings, pickled foods 2963
 - larvae enzymes, amylases, starch, biodegradation 1539
 - sewage, flow cytometry 3176
 - stones, biodegradation, Belgium 2117
 - water, flow cytometry 3176
- ketones, reduction, identification 3423
- landfills, newspapers, biodegradation 455
- lignin, biodegradation, characterization, screening 3535
- luminescence
 - naphthalene, biodegradation, soil 2532
 - xylene, biodegradation, soil 2532
- maize cobs, pretreatment, sodium hydroxide, cellulose, biodegradation, single cell protein, production 3511
- malonic acid, biodegradation, anaerobic conditions 2397
- marine fishes, spoilage 2023
- meat, contamination, Italy 2031
- meat products, contamination, Italy 2031
- metabolism
 - chromium, uptake, groundwater 1579
 - methane production, reviews 1798
- methane
 - sludges, anaerobic digesters, identification 2353
 - undecylbenzenesulfonate, biodegradation 3431
 - utilization, fish industry, effluents, biological treatment, anaerobic digestion 1761
- methanesulfonic acid, utilization, monooxygenase 658
- methylotrophic, hexamethylenetetramine, biodegradation 1440
- microbial contamination, swimming pools, chloroisocyanurates 209
- mussels, contamination, Morocco 2957
- nitric oxide, reduction 2741

Bacteria cont.

- nitrification
 - biological treatment, organic matter, substrates, production 3729
 - waste water, lagoons 1622
- nitrophenols
 - biodegradation
 - mathematical models 2557
 - phosphorus, rivers, Egypt 1563
- nutrients
 - recycling, mangrove swamps, tropics 1510
 - removal, activated sludge 1817
- nylon, biodegradation, genes 3609
- organic matter, mineralization, soil, anaerobic conditions 529
- organophosphonates, biodegradation, biochemical pathways 3713
- pathogens
 - foods, sampling, enumeration, reviews 2921
 - water pollution, heavy metals, India 1917
- pectate lyase, production, plant residues, biodegradation, fuels, production 3397
- pellets, formation, sewage sludge, anaerobic treatment 430
- petroleum, microbial contamination 3008
- petroleum hydrocarbons, biodegradation, sediment, USA 559
- phenol, carboxylation 2538
- phenol + organic compounds, biodegradation, kinetics 2394
- phenols, biodegradation 588
- phosphates, solubilization, determination, plate count 818
- phosphorus, removal, activated sludge, identification 3743
- physiology, organic compounds, biodegradation, detection 3492
- piggery effluent, ammonia, removal, Taiwan 2621
- pigmeat, modified atmosphere storage, keeping quality 978
- pigments, absorption, characteristics, blooms, formation, determination 272
- plastic pipes, biodegradation, water supply, biofilms, formation, characterization, dental health 2838
- polychlorinated biphenyls
 - biodegradation 2414
 - characterization, soil, pollution 3484
- polyhydroxybitterate, biodegradation 1550
- polymers
 - anaerobic treatment, bioreactors 1383
 - heavy metals, removal, aquifers, sand 645
 - trace metals, mobilization, soil 3677
- polyphosphates, accumulation, bioreactors, anaerobic treatment, aerobic treatment, population dynamics 1819
- population dynamics
 - activated sludge, retention times 1301
 - cocoa beans
 - fermentation
 - acetic acid, production 1984
 - lactic acid, production 1984
- populations, biological filtration, aerobic treatment, environmental factors, effects, techniques, determination, quinones 1281
- poultry meat
 - modified atmosphere storage, spoilage 154
 - vacuum packaging, spoilage 154
- predation, nitrification, biofilms, aerobic treatment 1654
- preservative treated wood, decay 184
- propanil, biodegradation, lakes 1564
- propionate, biodegradation, anaerobic treatment, electron transfer 3469
- prostheses, rubber, microbial contamination, biofilms, characterization 1018

Bacteria cont.*Pseudomonas*

strains

biological competition

chloroalkanes, biodegradation, biological filtration, bioreactors, aerobic conditions 3491

chlorobenzenes, biodegradation, biological filtration, bioreactors, aerobic conditions 3491

Pseudomonas aeruginosa, inoculation, polychlorinated biphenyls, biodegradation, enhancement, soil 3498

Pseudomonas putida, inoculation, polychlorinated biphenyls, biodegradation, enhancement, soil 3498

pyrites, mine spoil, iron, bacterial leaching, cobalt, effects 2670

recovery, broilers, carcasses, temperature, storage, effects 990

removal

foods, immunoaffinity columns 2203

whey, filtration 161

resistance

copper, water distribution, pipes, corrosion, genes 3038

water systems, microbial contamination, biocides, control 2133

sardines, histamine, production, measurement 117

sausages, packaging 143

soil

antagonism, trinitrotoluene, biodegradation, *Phanerochaete chrysosporium*, growth 1429

nitrophenols, biodegradation, determination 1150

Porphyridium, polysaccharides, biodegradation 2569

styrene, biodegradation, methodology 577

sulfides, ores, bacterial leaching 744

sulfur, oxidation, heavy metals, removal, sludges, bacterial leaching 2600

surface water

atrazine, biodegradation 621

simazine, biodegradation 621

surfaces, titanium, contamination, enumeration, dyes 3011

surfactants

biodegradation, sediment, rivers, interactions 3637

rivers, biodegradation, mathematical models, UK 3646

survival

composting, temperature 3171

determination 3868

microwave treatment 1116

sausages, cooking, cold storage 142

timbers, biodeterioration, mushroom houses, Poland 3002

transport

groundwater, geological sedimentation, models 3850

porous media, groundwater, contamination 3115

transport processes, porous media, models 789

2,4,6-tribromophenol, biodegradation, sediment, marine environment 3594

trichloroethene, biodegradation, reviews 3483

volatile organic compounds, biodegradation, screening 3177

waste water treatment

aerobic treatment

bioreactors

characterization 343

identification 343

phosphorus, uptake, enhancement 691

water

determination

bacterial count, isopropyl cinodine, nalidixic acid, effects 3907

flow cytometry 1848

water pollution, chlorinated hydrocarbons, bioremediation 312

Bacteria cont.

water systems, laboratories 2131

wheat straw, biodegradation, polysaccharidases, addition 550

Xanthobacter autotrophicus

strains

biological competition

chloroalkanes, biodegradation, biological filtration, bioreactors, aerobic conditions 3491

chlorobenzenes, biodegradation, biological filtration, bioreactors, aerobic conditions 3491

yeasts, injection, nitrogen, removal, activated sludge 1636

Bacterial count

beef

gamma radiation 970

modified atmosphere storage 965

vacuum packaging 965

control

pigmeat

quality

sodium chloride 2048

sodium lactate 2048

crab meat, evaluation 951

Cyprinus esculentus, stored products 934

Macruronus novaezelandiae, spoilage, New Zealand 2968

meat products, EU regulations, effects 2061

mineral waters, Spain 862

plant residues, domestic gardens, North America 3195

poultry, carcasses, abattoirs, mathematical models 1006

raw milk, techniques, plate count, luminescence, ATP, comparisons 159

sea water, coastal areas, water pollution, Australia 3150

Staphylococcus, beef, dried meat, Brazil 2040

tomato juice, food preservatives 98

water distribution, pipes, disinfection, residual effects 3037

Bacterial leaching

copper

mine tailings, *Thiobacillus ferrooxidans*, Canada, lipopolysaccharides 2672

mining

Flavobacterium, India 2671

Pseudomonas, India 2671

rocks

Thiobacillus ferrooxidans 747

Thiobacillus thiooxidans 747

heavy metals

removal, sludges, bacteria, sulfur, oxidation 2600

sewage sludge, *Thiobacillus* 643

iron

ore, *Thiobacillus ferrooxidans*, silver, ultraviolet radiation, effects 2591

pyrites, mine spoil, bacteria, cobalt, effects 2670

mathematical models, reviews 2677

metals, books 2804

molybdenum, *Thiobacillus ferrooxidans*, surfactants 1753

sewage sludge, heavy metals, removal, *Thiobacillus* 640

sulfates, gypsum, decomposition, *Desulfovibrio desulfuricans* + *Chlorobium thiosulfatophilum* 2612

sulfides, ores, bacteria 744

sulfur, oxidation, *Thiobacillus* 1600

zinc

dust, filters, industry, leaching agents, citric acid 2598

rocks

Thiobacillus ferrooxidans 747

Thiobacillus thiooxidans 747

Bacterial spores, destruction, hydrostatic pressure 31

Bacterial toxins*Clostridium botulinum*

detection 53

fish, estimation, ELISA 1951

Bacterial toxins cont.*Clostridium botulinum* cont.

prepared foods, vegetables, contamination 890

cytotoxin, production, beef, *Escherichia coli*, isolation 59

cytotoxins, production, *Escherichia coli* 1955

detection, fluorescence 1948

endotoxins, composting, health hazards 2308

enterotoxins

bakery products, *Staphylococcus aureus* 907

food poisoning, staphylococcaceae 1950

gene location, *Staphylococcus aureus*, DNA probes 50

production

Aeromonas, culture techniques 1946

Bacillus cereus, sucrose, hydrogen ions 887

screening

Escherichia coli

fish, microbial contamination 942

seafoods, microbial contamination 942

Staphylococcus aureus, sterilized milk, food poisoning 2080

Escherichia coli, meat, detection 3896

food poisoning, *Staphylococcus aureus* 889

Microcystis, water pollution, reservoirs, *Daphnia*, toxicity 1804

mycotoxin, *Microcystis aeruginosa*, lakes, water supply, Canada 3151

paralytic shellfish poisoning, detection, enzyme immunoassay 123

production

Alexandrium minutum

nitrogen, effects 2218

phosphorus, effects 2218

Anabaenopsis milleri 888

salted fish, *Clostridium botulinum*, food poisoning, Egypt 2013

shellfish, food poisoning, detection 893

survival, bakery products, *Staphylococcus aureus* 907

types, genes, *Clostridium perfringens*, classification, identification, polymerase chain reaction 2184

Bacteriocins

Bacillus cereus 3085

characterization

lactic acid bacteria, *Listeria monocytogenes*, control 3087

Lactobacillus brevis, antimicrobial properties 56

meat, *Leuconostoc carnosum* 58

curvaticin, amino acid sequences, *Lactobacillus curvatus* 3081

Leuconostoc mesenteroides, control 215

Listeria

control 215

Leuconostoc carnosum 2175

Listeria monocytogenes, control 2167

pediocin, production, *Pediococcus acidilactici*, nucleotide sequences 799

production

characterization, *Lactobacillus plantarum* 2173

Enterococcus faecalis

milk

Listeria innocua, control 1064

Listeria monocytogenes, control 1064

Enterococcus faecium

milk

Listeria innocua, control 1064

Listeria monocytogenes, control 1064

fermented foods, *Lactobacillus*, pathogens, control, Africa 103

fish products

Carnobacterium divergens 2167

Carnobacterium piscicola 2167

foods, lactic acid bacteria, reviews 214

- Bacteriocins** *cont.*
 production *cont.*
 lactic acid bacteria, *Listeria monocytogenes*, inhibition, fermentation, kimchi 1065
 Lactobacillus acidophilus, antimicrobial properties, characterization 1061
 Lactobacillus sake, techniques, nucleotide sequences 3863
 Leuconostoc carnosum, bacteria, inhibition 230
 optimization, lactic acid bacteria, culture 886
 pathogens, control, fish, *Lactobacillus plantarum*, isolation 1063
 sausages, *Lactobacillus plantarum* 2172
 Streptococcus thermophilus 2729
 resistance, *Listeria monocytogenes*, mutants 261
Yersinia kristensenii, *Yersinia enterocolitica*, inhibition, biological control 1068
- Bacterioides thetaiotaomicron**, starch, biodegradation, genetics 778
- Bacteriophages**
 detection
 Escherichia coli
 sewage
 Finland 767
 Nicaragua 767
 drinking water, monitoring, Israel 2898
 inactivation
 effluents, ultraviolet radiation, kinetics 2242
 waste water, ultraviolet radiation, kinetics 2242
 water, ultraviolet irradiation 3069
 infection, biofilms, *Escherichia coli* 2110
 models, fresh water, enterovirus, determination 2902
 removal
 industrial wastes, activated sludge 389
 sewage, activated sludge 389
Salmonella, faecal coliforms, groundwater, detection, assays, interactions, USA, Alabama 19
 survival
 groundwater, temperature 3147
 rivers, water, techniques, monitoring 3148
 soil, temperature 3147
Vibrio vulnificus, control, estuaries, USA 2177
- Bagasse**, biodegradation, anaerobic digestion, rumen microorganisms, methane production 2471
- Bahrain**, foods, microbial contamination 2815
- Bakery industry**
 effluents
 microbial flora
 characterization 697
 identification 697
- Bakery products**
 modified atmosphere packaging, plastic film, *Staphylococcus aureus*, enterotoxins, Italy 1983
Staphylococcus aureus
 enterotoxins 907
 survival 907
- Baking**, bread, *Clostridium sporogenes*, spores, survival, storage 1982
- Balanus amphitrite**, larvae, settlement, marine fouling, bacteria, bacteriocins, ubiquinones, control 2176
- Balanus amphitrite**, boats, fishing, biofouling, Taiwan 3040
- Baltic Sea**, cyanobacteria, blooms 1133
- Banana waste**, biodegradation, anaerobic digestion, biogas, production 3391
- Bananas**, puree, keeping quality, food preservatives 2003
- Bangladesh**, prawns, fresh water, microbial contamination, *Aeromonas* 2966
- Barbados**, faecal flora, contamination, surface water, enumeration, comparisons 1860
- Bark**, composts, stability, microorganisms, indicators 2295
- Barley straw**
 biodegradation
 feeds, production, *Pleurotus ostreatus*, growth, kinetics 3528
 Phanerochaete chrysosporium 1480
 Phlebia radiata 1480
 Sporotrichum thermophilum, enzymes, production 1472
- Basidiomycetes**
 cultures, preservation 817
 enzyme activity, xylanase 2770
 lignin, biodegradation, enzymes 3882
- Basidiomycotina**, sunflower husks, biodegradation 3516
- Bathing waters**, coastal areas, microbial contamination, *Staphylococcus*, indicator species 3156
- Baumea articulata**, comparisons, lagoons, wetlands, constructed, Australia 1341
- Bauxite**
 aluminium
 extraction
 bacteria 3796
 fungi 3796
- Bdellovibrio bacteriovorus**, foods, microbial contamination, control 2170
- Beaches**
 marine environment, Gram positive bacteria, taxonomy 2233
 sand, microbial contamination, Portugal 3136
 sewage effluent disposal, swimming, waterborne diseases, surveys, Australia 2832
- Bean sprouts**, *Salmonella*, Thailand 1979
- Beef**
 abattoirs, meat hygiene, USA 10
Aeromonas hydrophila
 growth
 modified atmosphere storage 960
 vacuum packaging 960
 bacterial count
 modified atmosphere storage 965
 vacuum packaging 965
 carcasses
 abattoirs, microbial contamination, detection, statistical analysis, Canada 2045
 Brochothrix thermosphacta, control, nisin, sprays 967
 Carnobacterium divergens, control, nisin, sprays 967
 decontamination
 Escherichia coli, methodology, comparisons 2044
 Salmonella typhimurium, methodology, comparisons 2044
 Listeria innocua, control, nisin, sprays 967
 Clostridium botulinum
 inhibition, *Pediococcus pentosaceus*, temperature, effects 1060
 spores, toxicity, control, sodium lactate, temperature 1073
 Clostridium perfringens
 detection, polymerase chain reaction 2041
 fish, contamination, temperature, tropics 963
 growth, temperature 134
 Clostridium sporogenes
 control
 glycerol monolaurin 966
 sodium gluconate 966
 sodium lactate 966
 cold storage, microbial flora 137
 contamination
 fish, *Aeromonas hydrophila*, temperature, tropics 963
 hamburgers, microbial flora 131
 Listeria monocytogenes, adhesion, characteristics 256
 moulds 133
 yeasts 133
 cooking, temperature, aphthovirus, survival, Argentina 2042
 cooling, *Clostridium perfringens*, spores, growth 2092
- Beef** *cont.*
 dried meat
 microbial flora, bacterial count, Brazil 2039
 Staphylococcus, bacterial count, Brazil 2040
Escherichia coli
 control
 acids, sprays 961
 organic acids 1040
 trisodium phosphate 136
 cytotoxin, production, isolation 59
 detection 2043
 DNA sequencing 1093
 fish, contamination, temperature, tropics 963
 isolation 2043
 verotoxins, production 1949
 gamma radiation
 bacterial count 970
 keeping quality 970
 keeping quality, modified atmosphere storage, Italy 2976
Listeria monocytogenes
 control
 glycerol monolaurin 966
 sodium gluconate 966
 sodium lactate 966
 growth
 modified atmosphere storage 960
 vacuum packaging 960
 inactivation, gamma radiation, temperature, fat, effect 2145
 inhibition, packaging, controlled atmospheres, carbon dioxide 962
 refrigeration
 potassium sorbate 2091
 sodium nitrate 2091
 microbial contamination
 control heat treatment, methodology 971
 Escherichia coli
 control
 acetic acid 964
 lactic acid 964
 pathogens, control, trisodium phosphate 2149
 modified atmosphere storage
 Enterobacteriaceae, differentiation, culture media 52
 Pseudomonas, differentiation, culture media 52
 pasteurization, *Listeria monocytogenes*, survival 968
 pathogens
 control
 gamma radiation 2977
 sodium lactate 135
Salmonella, detection, polymerase chain reaction 3
Salmonella typhimurium
 control
 electric current 2038
 trisodium phosphate 136
 spoilage, cold storage, prediction, assays 2975
Staphylococcus aureus, inactivation, gamma radiation, temperature, fat, effect 2145
 vacuum packaging
 bacteria, amines, production 969
 Listeria monocytogenes, growth 2974
Yersinia enterocolitica
 growth
 modified atmosphere storage 960
 vacuum packaging 960
 Morocco 2032
- Beers**
 fermentation, enzymes, toxicity 919
 spoilage
 lactic acid bacteria, mathematical models 1991
 Pectinatus, heat resistance 1993
 Pectinatus frisingensis, volatile fatty acids, production, mathematical models 1995
 volatile fatty acids, production, *Pectinatus frisingensis*, mathematical models 920

- Beet sugar**, waste water, biological treatment, lagoons, Morocco 714
- Belgium**
building materials, biodeterioration 2125
denitrification, sewage, biological treatment 1649
kitchen waste, anaerobic digestion 3354
organic wastes, composting 2300
sediment, contamination, organic compounds, bioremediation 3211
stones, biodeterioration, bacteria, isolation 2117
- Benomyl**, biodegradation, soil, *Phanerochaete chrysosporium* 1554
- Bentonite**
supports
waste water, anaerobic digestion 1233
wastes, anaerobic digestion 1233
- Benzalkonium chloride**
meat, processing, equipment, *Staphylococcus*, resistance 240
poultry meat, processing, equipment, *Staphylococcus*, resistance 240
- Benzaldehyde**, biodegradation, *Pseudomonas*, biochemical pathways 2576
- Benzene**
biodegradation
determination, respirometry, kinetics 1514
interactions
microorganisms 572
Pseudomonas 572
microorganisms, aerobic conditions 2524
Mycobacterium vaccae, soil, metabolites, toxicity 574
porous media, microbial activities, kinetics, mathematical models 2700
Pseudomonas, enzyme activity, gene amplification 2505
toluene, xylene, mixtures, biodegradation, *Pseudomonas putida*, genetic engineering 2504
- Benzimidazoles**, biodegradation, activated sludge 655
- Benzo-a-pyrene**, biodegradation, *Bjerkandera*, species, characterization, optimization 3561
- Benzoate**
biodegradation
Pseudomonas
coenzyme A 1448
new species 521
Rhodospseudomonas palustris, biochemical pathways 3437
- Benzoates**
biodegradation
bioreactors
granules
cresols, inhibition 2552
phenols, inhibition 2552
catabolism, *Pseudomonas*, nucleotide sequences 2422
- Benzoic acids**
biodegradation
Alcaligenes + yeast extracts 2433
Pseudomonas 2433
- Benzothiazoles**, biodegradation, activated sludge 655
- Benzothiazophene**, biodegradation, *Pseudomonas putida*, metabolites 507
- Benzyl thiocyanate**, metabolism, *Streptomyces aureofaciens* 659
- Betula papyrifera**, wood chips, biodeterioration, *Phellinus noxius* 2099
- Beverages**
coffee
Bacillus stearothermophilus 219
Clostridium thermoaceticum 219
microbial contamination
determination, Nigeria 916
yeasts, detection 1994
production, *Saccharomyces cerevisiae*, isolation, characterization 3131
spoilage, yeasts, sorbic acids, resistance 1121
yeasts, Nigeria 91
- Bibliographies**, food safety 3911
- Bifidobacterium**
inhibition, of *Escherichia coli* 1067
sodium acetate, fish, spoilage, control 2015
- Bifidobacterium bifidum**, growth, milk, pathogens, inhibition 2705
- Biochemical oxygen demand**
determination, bioassays, waste water treatment, effluents 296
measurement, waste water, biosensors + *Bacillus licheniformis*, efficiency, heavy metals 1149
- Biochemical pathways**
benzaldehyde, biodegradation, *Pseudomonas* 2576
genetics, naphthalene, biodegradation, *Pseudomonas putida* 3564
naphthalene, biodegradation, *Pseudomonas stutzeri*, strains, genetics, comparisons 3555
organophosphonates, biodegradation, bacteria 3713
p-cresol, biodegradation, *Aspergillus fumigatus* 3497
phenolic compounds, biodegradation, *Agrobacterium tumefaciens*, genetics 3595
- Biochemistry**
biochemical pathways
atrazine, biodegradation, *Rhodococcus* 3620
EPTC, biodegradation, *Rhodococcus* 3620
chitin, biodegradation, chitinase, *Bacillus circulans* 607
kinetics, halogenated hydrocarbons, biodegradation, bacteria 3453
- Biocides**
bacterial products, books 831
control, water systems, microbial contamination, bacteria, resistance 2133
cooling towers, *Legionella*, control, Australia 2158
effects, metals, microbial corrosion, determination 1022
Escherichia coli, inhibition 2725
marble, discoloration, microorganisms, control, Italy 203
microorganisms
resistance 2147
epidemiology 3054
Germany, epidemiology 3053
stonework, biodeterioration, bacteria, control, UK 3013
sulfate reducing bacteria
control
instrumentation, screening 2154
pipelines, biofilms, physical models 3028
surfaces, contamination, *Salmonella enteritidis*, survival 2854
- Biodegradation**
biochemistry, books 2809
biofilms, reviews 3869
enhancement, organic compounds, non aqueous liquids, surfactants, soil 3462
groundwater, creosote, compounds, interactions, aerobic conditions 3403
pollutants, wood destroying fungi, reviews 3205
poly-(β -hydroxybutyrate-co- β -hydroxyvalerate)
microorganisms
aerobic conditions 3614
anaerobic conditions 3614
reviews 286
techniques, determination, enhancement 2248
toxic substances, books 2813
wastes, books 2813
- Biodeterioration**, biofilms, reviews 3869
- Biofilms**
accumulation
fluidized beds
aerobic conditions
sewage, biological treatment 3261
waste water, biological treatment 3261
- Biofilms cont.**
activated sludge, aerobic conditions, nutrients, removal, waste water 3326
activity, sewage, biological treatment, fluidized beds 1185
adhesion
assessment, biological fixed-film systems 1268
electrodes, drinking water, denitrification, mathematical models 676
aerobic conditions, sewage, treatment, *Nitrosomonas*, new species 3862
aerobic treatment, nitrification, bacteria, predation 1654
algae, mathematical models 2771
bacteria
determination, bacterial count, isopropyl cinodine, nalidixic acid, effects 3907
morphology, characteristics, biological filtration, anaerobic conditions 1282
properties, characteristics 1216
stainless steel, surfaces, isolation 1023
biodegradation, reviews 3869
biodeterioration, reviews 3869
biological filtration, nitrifying bacteria, dynamics 1617
biological fixed-film systems, microbial activities, dyes, azo compounds, inhibition 1280
bioreactors
anaerobic treatment, scanning electron microscopy, inoculum 1222
microbial flora, distribution 2279
characterization, activity, waste water treatment, reviews 3254
ciliates, biomass, population dynamics 1840
competition, microorganisms, waste water, biological treatment 1176
control, biological treatment, filters, waste water, USA 2311
cyanobacteria, biofloculants, production, metals, bioremediation 3224
denitrification
biological treatment, fluidized beds, mathematical models 1633
sludges
biological treatment, substrates, utilization 3732
hydrolysis, utilization, substrates 1619
detachment, dynamics, waste water treatment, bioreactors, mathematical models 2272
development, waste water treatment, anaerobic digesters, calcium 3344
diffusion, biological filtration, submerged, sewage 1277
dynamics, waste water treatment, fluidized beds, bioreactors 1175
ecology, stonework, biodeterioration, microorganisms, Italy 3015
Escherichia coli, bacteriophages, infection 2110
filters, biological treatment, mathematical models, kinetics 3253
formate, biodegradation, anaerobic conditions, models, kinetics 3538
formation
biological fixed-film systems, mathematical models 1180
stainless steel, *Listeria monocytogenes*, nutrients 2111
supports, magnetic, activated sludge, performance 393
waste water treatment, bioreactors 2281
water supply, plastic pipes, biodeterioration, bacteria, characterization, dental health 2838
groundwater, solutes, transport, mathematical models 279
growth
biological filtration, aerobic conditions, hydrodynamics, sewage, mathematical models 1273

Biofilms *cont.*growth *cont.*

- bioreactors, membranes, gas permeable 1213
- dynamics, nitrification, biological fixed-film systems 1655
- sewerage, oxygen, sulfates, reduction 3356
- techniques, estimation 1152
- waste water, biological treatment, fluidized beds, anaerobic conditions 3822
- water distribution, disinfection, effects 1052
- halogenated hydrocarbons, biodegradation, microorganisms, kinetics 2395
- heterotrophic microorganisms, sewage, reviews 1822
- kinetics
 - fluidized beds 3265
 - sewage, biological treatment, fluidized beds, anaerobic conditions, mathematical models 1225
 - waste water treatment 1174
- Klebsiella pneumoniae*
 - disinfection
 - chlorine 3066
 - monochloramine 3066
- linear alkylbenzenesulfonates, biodegradation, rivers, Japan 1569
- membranes
 - dynamics, xylene, biodegradation, mathematical models 1493
 - xylene, biodegradation, flow velocities 1494
- metals, surfaces, disinfection, monochloramine 2164
- microbial activities, estimation 1217
- microbial flora
 - oilfields
 - machinery, characterization 3895
 - water, characterization 3895
 - reviews 1864
- nitrification
 - efficiency, nitrite, concentration, biological filtration, effluents 3303
 - population dynamics 1650
 - rotating biological contactors, phosphorus, effects 1391
- organic matter, biodegradation, rivers, mathematical models 345
- oxygen, concentration, waste water treatment, determination, microelectrodes 1189
- plastics, adhesion, bioreactors, hydrocarbons, biodegradation 578
- Pseudomonas aeruginosa*, characteristics 3866
- quinoline, biodegradation, mathematical models 2442
- rotating biological contactors, evaluation 444
- sewage
 - anaerobic treatment
 - bioreactors, mathematical models 3274
 - mathematical models 3273
- silicone rubber, biodeterioration, *Candida tropicalis* 3009
- stonework, biodeterioration, *Penicillium frequentans* 202
- structure
 - mass transport, bioreactors, organic compounds, biodegradation, reviews 2284
 - pores, analysis, rotating biological contactors 1392
- sulfides, formation, sewerage 1191
- thickness
 - effects, waste water, ethylene dichloride, biodegradation, biological fixed-film systems 3428
 - measurements, microscopy 1178
 - variability
 - Klebsiella pneumoniae*, analysis 2706
 - Pseudomonas aeruginosa*, analysis 2706
 - waste water treatment, biological fixed-film systems, measurement 3355

Biofilms *cont.*

- toluene, biodegradation, biological fixed-film systems, denitrification 1507
 - tortuosity, diffusivity, models 330
 - volatile fatty acids
 - diffusivity 528
 - utilization, methane production, kinetics 424
 - waste water
 - anaerobic treatment
 - bioreactors, mathematical models 3274
 - mathematical models 3273
 - waste water treatment, heterotrophic microorganisms, autotrophic microorganisms, competition, mathematical models 1188
 - wood, biodegradation, enzyme activity, aquatic environment, Australia 2479
- Biofilms+membranes**
- ethylbenzene, removal 2445
 - xylene, removal 2445
- Biofloculants**, production, metals, bioremediation, cyanobacteria, biofilms 3224
- Biofouling**
- bacteria, biofilms, reviews 3039
 - boats
 - fishing
 - Balanus amphritite*, Taiwan 3040
 - Dexiospira*, Taiwan 3040
 - Tanais caolinii*, Taiwan 3040
 - control
 - fish farms
 - antifouling agents, Malaysia 3041
 - tributyltin oxide, Malaysia 3041
 - Mytilus edulis*, antifouling agents, production, *Dendronephthya*, control 221
 - reviews 1868
- Biogas**
- carbon dioxide, removal, *Arthospora* 483
 - desulfurization
 - hydrogen sulfide, removal, *Ectothiorhodospira shaposhnikovii* 2609
 - Thiobacillus ferrooxidans*, bioreactors 1595
 - hydrogen sulfide, removal, *Arthospora* 483
 - production
 - animal wastes, pathogens, removal, indicator species, bacteria, Denmark 1760
 - banana waste, biodegradation, anaerobic digestion 3391
 - biomass, ecology 3396
 - cattle manure
 - anaerobic digesters, design, India, temperature, effects 1762
 - biological treatment, anaerobic digesters, design, India 2355
 - coir, biodegradation, anaerobic digestion 3391
 - crop residues, fermentation, anaerobic digesters, operation, kinetics 3574
 - dimethyl terephthalate, production, waste water, anaerobic treatment, biomass, supports 1687
 - Eichhornia crassipes*, utilization, anaerobic digestion, methodology, kinetics 484
 - farmyard manure, biodegradation, anaerobic digestion, Czech Republic 1419
 - manures 488
 - composting 750
 - meatworks effluent, anaerobic treatment, Germany 491
 - pig manure
 - biodegradation 494
 - biological treatment, Netherlands 2687
 - pig slurry, anaerobic digestion, zeolites, additives, Cuba 1422
 - plant residues 488
 - biodegradation, reviews 3395
 - poultry manure, India 3392
 - pulp mill effluent, bisulfites, anaerobic treatment 1718

Biogas *cont.*production *cont.*

- refuse
 - biological treatment, anaerobic digesters, USA 3353
 - utilization, anaerobic digestion, methodology, kinetics 484
 - sewage, refuse, composting + aerobic digestion, fuel cells 438
 - sewage sludge 488
 - silkworms, pupae, wastes, anaerobic digestion 487
 - slaughterhouse waste, anaerobic treatment, Germany 491
 - sugarcane byproducts 488
 - wastes, biodegradation, reviews 3395
 - wood residues 488
- Biological activity in soil**
- cypermethrin, residues, biodegradation, Brazil 2570
 - techniques, determination, population genetics 825
- Biological competition**
- Alcaligenes xylooxidans*
 - activity, soil inoculation 3865
 - growth, soil inoculation 3865
- Biological control**
- crops, postharvest decay 105
 - hepatitis A virus, bacteria, isolation, animal manures, USA 3083
 - Lactococcus*, bacteriocins, meat, vacuum packaging, *Leuconostoc*, spoilage 956
 - polypropylene, surfaces, *Listeria monocytogenes*, adhesion 3088
 - stainless steel, surfaces, *Listeria monocytogenes*, adhesion 3088
- Biological control + *Bacillus***, apples, storage decay, fungi 2006
- Biological filtration**
- activated carbon, petroleum, waste gases 2499
 - activated sludge
 - effluents, odour abatement 385
 - nutrients, removal, waste water 3699
 - aeration
 - assessment, sewage 1259
 - denitrification, kinetics 1206
 - nitrification 1615
 - nutrients, removal, sewage 1276
 - sewage, reviews 1267
 - aerobes, determination, bacterial count 3908
 - aerobic conditions, hydrodynamics, biofilms, growth, sewage, mathematical models 1273
 - aerobic treatment, bacteria, populations, environmental factors, effects, techniques, determination, quinones 1281
 - anaerobic conditions
 - biofilms, bacteria, morphology, characteristics 1282
 - coffee industry, waste water treatment 694
 - design, whey 2317
 - seafoods, processing, waste water, sodium, sulfate, effects 1673
 - stability, slaughterhouse waste 2697
 - wines, production, waste water 1664
 - anaerobic treatment
 - industrial wastes 2314
 - methane production, biomass, characterization 1269
 - seafoods, processing, waste water 2318
 - sugar refineries, waste water, Japan 719
 - waste water, synthetic, milk 1680
 - biofilms
 - nitrifying bacteria, dynamics 1617
 - waste treatment
 - animal manures 3267
 - waste gases 3267
 - waste water 3267
 - bioreactors
 - chloroalkanes, biodegradation, bacteria, strains, biological competition, aerobic conditions 3491

Biological filtration cont.

- bioreactors *cont.*
 - chlorobenzenes, biodegradation, bacteria, strains, biological competition, aerobic conditions 3491
 - slaughterhouse waste, biodegradation, anaerobic treatment 2699
 - waste treatment
 - animal manures 3267
 - waste gases 3267
 - waste water 3267
- colloids, biodegradation, mathematical models 1395
- composts, hydrogen sulfide, removal, waste gases, industry 1667
- concrete, corrosion, sewerage, Netherlands 3017
- denitrification 1621
 - carbon, utilization 1620
 - enhancement, oxygen, limitation, covers 3741
- distillery effluent, waste water treatment 713
- drinking water
 - ammonia, removal, UK 742
 - iron, removal, UK 742
 - manganese, removal, UK 742
- efficiency, seafoods, processing, waste water 2319
- effluents, nitrite, concentration, biofilms, nitrification, efficiency 3303
- filters
 - design
 - denitrification, waste water 1645
 - nitrification, waste water 1645
 - submerged, nitrification, denitrification, microbial flora 3698
 - gases, toluene, removal, mathematical models 2503
 - hydrogen sulfide, removal, sulfur, production 3708
 - ice cream, production, waste water, anaerobic conditions 2315
- landfills
 - ammonia, emission, control, USA 2404
 - volatile organic compounds, emission, control, USA 2404
- membranes, anaerobic conditions, sewage 1283
- methanol
 - addition
 - nitrogen
 - removal
 - waste water treatment UK 3727
 - USA 3727
- methylene chloride, biodegradation, microorganisms 386
- Methylobacterium fodyanum*, methane, removal, coal mines, polluted air 3797
- nitrification
 - denitrification, sewage, kinetics 1634
 - design, drinking water 1750
 - sewage 1266
 - treatment, UK 380
- nitrogen, removal, waste water treatment 3726
- odour abatement, sewerage, Netherlands 3017
- palm oil mill effluent, fluidized beds, anaerobic conditions, comparisons 2640
- pathogens, removal, sewage, UK 380
- prawns, production, ponds, waste water, recycling 3366
- rotating biological contactors, sewage, comparisons 1207
- sand
 - anaerobic treatment, lagoons, waste water, Morocco 2273
 - drinking water
 - manganese, removal, nitrates, effects 741
 - viruses, removal 2897
 - nitrogen, removal, Sweden 1603
 - phosphorus, removal, Sweden 1603
 - septic tank effluent, biodegradation 387
 - sewage, France 2312

Biological filtration cont.

- sand *cont.*
 - water purification, mathematical models 740
 - sewage
 - artificial wetlands, UK 1374
 - biological treatment 1262
 - France 1261
 - treatment, upgrading, UK 449
 - sewage effluent
 - Saudi Arabia 1270
 - suspended solids, removal, tropics 3306
 - submerged, biofilms, diffusion, sewage 1277
 - sugar factory waste, waste water treatment 713
 - surfactants
 - sulfonates
 - biodegradation 3644
 - organic compounds, refractory, detection 3645
 - upflow, pulp and paper industry, waste water 1696
 - upgrading
 - denitrification, sewage, Germany 1639
 - nutrients, removal, Germany 1275
 - sewage, Germany 1274
 - USA 382
 - upward flow
 - sewage, biological treatment, reviews 1260
 - waste water, biological treatment, reviews 1260
 - waste gases
 - evaluation
 - ammonia 1271
 - butanal 1271
 - mathematical models 3247
 - methylene chloride, biodegradation, *Hyphomicrobium* 3307
 - styrene, biodegradation, fungi 3605
 - waste water treatment 2313
 - faecal coliforms, removal 1775
 - odour abatement, Germany 766
 - wood chips, septic tank effluent, treatment, USA 383
- Biological filtration + microfiltration, sewage, pathogens, removal, efficiency 3268**
- Biological fixed-film systems**
- activated sludge**
- biomass, population dynamics 1156
 - bioreactors, sludges, granulation, comparisons 3250
 - aerobic conditions, bioreactors, design, biomass, microbial flora 3259
 - anaerobic treatment
 - activated sludge, dyes, biodegradation 2652
 - aerobic treatment, sewage, Germany 1192
 - chlorates, biodegradation, pulp mill effluent 1715
 - mathematical models 3272
- biofilms**
- adhesion, assessment 1268
 - formation, mathematical models 1180
 - microbial activities, dyes, azo compounds, inhibition 1280
- denitrification**
- bacteria, biofilms, operation 3861
 - drinking water 3789
 - filters, biological treatment, upgrading 3740
 - Pseudomonas aeruginosa* 677
 - toluene, biodegradation, biofilms 1507
- design**
- nutrients
 - removal
 - sewage 1263
 - waste water 1263
- effluents**
- fatty acids, waste water treatment, methane production 2392
 - quality, variation 347
 - flow, chlorophenols, removal 2553
 - microbial flora, characterization, RNA probes 2703

Biological fixed-film systems cont.

- monochlorophenols, biodegradation 2550
 - nitrification 1616
 - biofilms, growth, dynamics 1655
 - oxygen, inhibition 1618
 - tannery waste, inhibition 3739
 - textile industry, waste water, inhibition 3739
 - phosphorus, removal 689
 - pulp mill effluent, chemical oxygen demand, removal 1708
 - reviews 1265
 - rotating biological contactors, pentachlorophenol, biodegradation, fungi 3575
 - volatile compounds, biodegradation, mathematical models 2444
 - waste water
 - aerobic treatment
 - design, performance 1212
 - sulfates, effects 1214
 - biological treatment, reviews 1278
 - ethylene dichloride, biodegradation, biofilms, thickness, effects 3428
 - synthetic, treatment, Germany 1224
 - waste water treatment 381
 - biofilms, thickness, measurement 3355
 - water purification, chlorophenols, removal 2548
- Biological fixed-film systems + activated sludge, pulp mill effluent, treatment, Sweden 1702**
- Biological fixed-film systems + aquatic plants, piggery effluent, waste water treatment 2685**
- Biological indicators, landfill leachates, pollution, environment 1157**
- Biological treatment**
- acid mine drainage**
- wetlands
 - Australia 1359
 - constructed 1354
- activated carbon**
- beds
 - water purification
 - Acinetobacter junii*, inoculation 1747
 - Rhodococcus rhodochrous*, inoculation 1747
- activated sludge**
- aircraft, paints, stripping, waste water, microbiology 2678
 - linear alkylbenzene sulfonate, biodegradation, waste water, Italy 2580
- sewage**
- Aeromonas veronii*, removal, Italy 293
 - mathematical models, optimization 1284
 - surfactants, biodegradation 2581
 - waste water, mathematical models, optimization 1284
- aerobic conditions**
- bacteria, methane production, waste water, reviews 1196
 - night soil, nitrogen, biodegradation, nitrous oxide, emission, Japan 762
 - septic tanks, sludges, nitrogen, biodegradation, nitrous oxide, emission, Japan 762
 - waste water, sulfate reducing bacteria, reviews 1196
- aerobic treatment, enhancement, pulp mill effluent, pretreatment 1705**
- agricultural wastes, reviews 1757**
- air, contamination, organic compounds, removal, mathematical models 2235**
- alkaline pulping**
- anaerobic digestion, lignin, inhibition 1730
 - waste water, bioreactors, sludges, granulation 2660
- amines, fluidized beds 2554**
- anaerobes**
- sewage
 - sulfates 3814
 - sulfides 3814
 - toxicity 3814

Biological treatment cont.

- anaerobes *cont.*
 - waste water
 - sulfates 3814
 - sulfides 3814
 - toxicity 3814
- anaerobic conditions
 - coffee industry, waste water, Mexico 3760
 - dyes, azo compounds, decolorization, microbial flora 3772
 - pharmaceutical products, waste water 1684
 - phosphorus
 - removal
 - sludges, volatile fatty acids, production, effects 1658
 - solids retention time, effects 3754
 - thermomechanical pulping, waste water 3774
- anaerobic digestion, surfactants, biodegradation 2581
- bioreactors
 - comparisons, chemical industry, waste water 3771
 - design, sewage sludge, primary, fermentation 3258
 - hemp, pulping, waste water, decolorization, *Phanerochaete chrysosporium* 1723
- bleaching, wood pulp, *Phanerochaete sordida*, manganese peroxidase, metals, effects 2657
- brewery effluent
 - aerobic conditions, temperature 1674
- anaerobic digesters, design, bacteria, granules 1663
- brine, bioreactors, halophilic bacteria, USA 2278
- cane sugar, waste water, methane production, India 713
- cattle manure, anaerobic digesters, design, biogas, production, India 2355
- chemical industry, waste water, Israel 1690
- coal, carbonation, waste water, activated sludge 2674
- coke
 - ovens, waste water, activated sludge, oxygen + biological filtration, Australia 3801
 - production, waste waters, phenolic compounds, removal, activated sludge, Poland 590
- comparison, nutrients, removal, waste water, UK 3703
- comparisons
 - pulp mill effluent, Canada 1703
 - sewage, Canada 1211
- control, performance, waste water 1201
- cyanide, removal, almonds, seeds, waste water, fluidized beds, aerobic conditions 3687
- dairy effluent 702, 704
 - anaerobic digesters, hybrids, performance 2646
 - wetlands, constructed, *Schoenoplectus validus*, New Zealand 1340
- dairy industry, wastes, reviews 708
- dairy waste water, wetlands, artificial, New Zealand 3763-3764
- dairy wastes 702
 - Norway 2643
- denitrification
 - effluents, recirculation, ponds + lagoons, aeration 3716
 - sewage
 - Belgium 1649
 - reviews 1643
- design
 - nitrogen
 - removal
 - sewage, effluents 1652
 - textile industry, effluents 1652
- distillery effluent, sweet potato, *Geotrichum* 1835
- drinking water, disinfection, kinetics 3786

Biological treatment cont.

- dyes
 - triphenylmethane, discoloration, fungi 2664
- waste water, reed beds, gravel 1355
- filters
 - biofilms, control, waste water, USA 2311
 - sand, water purification 3787
 - submerged
 - denitrification 1264
 - nitrification 1264
 - phosphorus, removal, sewage 1657
- fish industry, effluents, anaerobic digestion, bacteria, methane, utilization 1761
- fluidized beds
 - activated carbon, landfill leachate, biodegradation 456
 - activated sludge, inoculation, phenols, biodegradation 1527
 - anaerobic conditions
 - sewage
 - biofilms, kinetics, mathematical models 1225
 - microbial flora, methane production, population dynamics 1187
 - denitrification
 - biofilms, mathematical models 1633
 - groundwater 1744
 - nitrate, removal, drinking water, Germany 1743
 - nitrogen, carbon, removal, sewage, aerobic treatment, anaerobic treatment 1184
 - sewage 446, 1183
 - biofilms, activity 1185
 - mathematical models
 - performance 1186
 - Turkey 2282
 - Zoogloea ramigera*, biofilms, mathematical models, substrates, utilization 1805
 - waste water
 - mathematical models, Turkey 2282
 - reviews 1182
- food processing, waste water, wetlands, USA 1670
- food wastes 702
- forest industry, waste water, anaerobes, toxic substances, inhibition 1714
- gases
 - hydrogen sulfide, removal, reviews 2606
 - volatile compounds, removal, filters, composts 3304
- industrial wastes
 - activated sludge, bioreactors, dynamics, time series, data analysis 411
 - effluent, pretreatment, reviews 1862
 - heavy metals, removal 1204
 - reviews 3249
 - waste water, activated sludge, design 2322
- kraft mill effluent, toxicity, *Phanerochaete chrysosporium*, performance 734
- lagoons
 - aeration, pulp mill effluent, organic halogen compounds, removal, New Zealand 1704
 - beet sugar, waste water, Morocco 714
 - landfill leachates, aquatic plants, wetlands, constructed 1360
 - liquid wastes, activated carbon+biomass, adhesion, evaluation, scanning electron microscopy 2251
- maize, processing, waste water, anaerobic digesters, design, bacteria, granules 1663
- meat production
 - waste water
 - lagoons
 - coliphages 1145
 - indicator species 1145

Biological treatment cont.

- milk processing, waste water, anaerobic digesters, supports, sepiolite, kinetics 1380
- Netherlands
 - nitrogen, removal, waste water 3701
 - phosphorus, removal, waste water 3701
- nitrification
 - coke, production, effluents, ammonia, effects 1628
 - effluents, recirculation, ponds + lagoons, aeration 3716
 - organic matter, substrates, production, bacteria 3729
 - sewage, reviews 1643
 - sewage sludge, liquors, ammonia, effects 1637
- nitrogen
 - reduction, waste water, wetlands, artificial 3339
 - removal
 - slaughterhouse waste, activated sludge, mathematical models 1782
 - waste water, activated sludge, control, redox potential 617
- nutrient removal
 - sewage, wetlands 1353
 - waste water
 - mathematical models 672
 - wetlands, USA 1361
- nutrients
 - removal
 - sewage, Netherlands 3702
 - sewage effluent, wetlands, Australia 1364
 - waste water, Netherlands 3700
- oil refineries, waste water, ponds, aeration 3770
- oil refinery wastes
 - lagoons, Singapore 561
 - Thiobacillus denitrificans* 3541
- olive oil
 - mills, waste water, wood destroying fungi 3758
- production
 - waste water
 - Azotobacter chroococcum*, growth, Spain 2639
 - bioreactors, aerobic conditions, Italy 3761
 - phenols, removal, *Lentinula edodes* 2536
- on-site, waste water, viruses, removal 3255
- organic compounds, removal, slaughterhouse waste, activated sludge, mathematical models 1782
- petrochemical industry
 - activated sludge, powdered activated carbon, Israel 727
 - waste water, reviews, Israel 1692
- pharmaceutical products
 - production, waste water, activated sludge, pretreatment, iron, hydrogen peroxide 723
 - waste water, activated sludge, sludges, disposal 1683
- phenol, fluidized beds 2554
- phenols
 - biodegradation, waste water, saline water, oilfields, bioreactors, bacteria, halophiles, USA 1694
 - removal, pulp mill effluent, bioreactors, fluidized beds 1734
- phosphorus
 - reduction, waste water, wetlands, artificial 3339
 - removal
 - sewage sludge, Sweden 3706
 - waste water, Netherlands 3750
- photography
 - waste water
 - activated sludge 1426
 - anaerobic digestion 1691
- pig manure
 - biogas, production, Netherlands 2687
 - Spirulina maxima*, immobilization 752
- pig slurry, lagoons, France 2686

Biological treatment cont.

- piggery effluent
 - activated sludge, nitrous oxide, emission 3808
- Phormidium* 1767
- polluted soils, anthracite waste, rotating biological contactors 3459
- ponds
 - algae, growth, organic carbon, effects 413
 - bacteria, growth, organic carbon, effects 413
 - latex, rubber, waste water, India 2669
 - light, penetration, algae, effects 414
- potatoes, wastewater, activated sludge, microorganisms, augmentation 2320
- pulp and paper industry
 - effluents, activated sludge, Canada 2653-2654
- waste water
 - activated sludge 1426
 - mathematical models, settlement 1711
 - phosphorus, addition 1712
 - organic compounds, removal, reviews 732
 - reviews 1729
- pulp mill effluent
 - activated sludge 1726
 - activated carbon, addition 1727
 - bioreactors, performance 1728
- air, emissions, heat treatment, condensates, addition, effects 1706
- aquatic plants 1357
- biodegradation, activated sludge 1725
- bioreactors, fluidized beds 1733
- decolorization, *Coriolus versicolor* 2659
- organochlorine compounds, removal, biomass, temperature 1732
- wetlands, constructed 1356
- pulps, bleaching, effluents 1737
- recycling, agricultural wastes, refuse, Norway 3358
- refuse
 - anaerobic digesters, biogas, production, USA 3353
 - landfill leachates, reed beds, constructed 1363
- rotating biological contactors, aircraft, paints, stripping, waste water, microbiology 2678
- septic tank effluent, filters, peat, pathogens, removal 3308
- sewage
 - activated sludge
 - chemical oxygen demand, quantification, mathematical models 2258
 - control 1328
 - flow, dynamics 1292
 - mathematical models 3310
 - microbial activities, techniques, monitoring 3180
 - updating, Austria, design, performance 1293
 - activated sludge + crossflow microfiltration 1286
 - activated sludge + media, polyurethane 1291
 - application to land, China 3369
 - biological filtration 1262
 - France 1261
 - upward flow, reviews 1260
 - bioreactors 1237
 - biofilms, Norway 1173
 - hydraulic residence, equations, determination 418
 - books 3912
 - denitrification, respiration rate, determination 1613
 - effluents, irrigation, Kuwait, performance 2363
 - equipment, aeration, stirring, upgrading 1778
 - filters, soil, design, Germany 1334
 - fish ponds, Côte d'Ivoire 1398
 - fluidized beds
 - aerobic conditions, biofilms, accumulation 3261
 - biofilms 1210

Biological treatment cont.

- sewage cont.
 - holiday accommodation, activated sludge, Turkey 769
 - hotels, activated sludge, Turkey 769
 - Japan 1202
 - lagoons
 - coliphages 1145
 - hydraulic residence, equations, determination 418
 - indicator species 1145
 - lagoons + rotating biological contactors, Germany 1370
 - low strength, wetlands, constructed, Canada 1337
 - marshes, USA 420
 - microorganisms, immobilization, cellulose triacetate 1190
 - nitrification, inhibition, toxic substances, Denmark 1629
 - nutrients, removal, techniques, control 2619
 - organic compounds, mathematical models 2436
 - oxidation ditches 2337
 - Egypt 2338
- ponds
 - algae, performance, Morocco, climate, effects 416
 - anaerobic conditions 1230
 - Daphnia*, mathematical models 3333
 - Eichhornia crassipes* 2271
 - mathematical models, kinetics 422
 - Salvinia molesta* 2271
 - rotating biological contactors 443
 - biofilms, dissolved oxygen concentration, determination, microelectrodes 1394
 - surfactants, alkanes, removal, efficiency 3636
- wetlands
 - Australia, water depths, effects 1344
 - constructed
 - aquatic plants, selection 1339
 - Australia 1336
 - design 1366
 - higher plants 1338
 - USA 1365
 - reed beds, Japan 1335
 - sewage effluent, wetlands, lagoons, Australia 1350
 - sewage + poultry, abattoirs, effluents, *Campylobacter*, contamination, Netherlands, surveys 292
 - sewage sludge
 - nematoda, eggs, viability 3166
 - production, reduction, activated sludge, aerobic digestion, bioreactors 3317
 - surfactants, alkanes, removal, efficiency 3636
 - slaughterhouse waste
 - activated sludge, nitrification, chemical oxygen demand, removal 3816
 - anaerobic digesters, supports, bentonite, kinetics 1380
 - bioreactors, performance, kinetics 2698
- sludges
 - anaerobic treatment, thermophilic microorganisms, Denmark 1774
 - phosphorus, fixation 2634
 - statistical analysis 2253
 - sugarcane, washing, waste water, anaerobic digestion, USA 712
 - sulfides, organic compounds, toxicity, removal, waste water, *Thiobacillus denitrificans* 3430
 - surfactants, biodegradation, reviews 1568
 - toluene, removal, groundwater, bioreactors, fluidized beds 2527
- upgrading
 - design, performance, sewage sludge, sedimentation, tanks 1193
 - nitrogen, removal, sewage, computer simulation, Netherlands 1776
 - nutrients, removal, sewage, Germany 1608

Biological treatment cont.

- upgrading cont.
 - waste water, lime, addition 1194
- volatile compounds, gases, refuse, determination, GC/MS 1153
- waste gases, bioreactors, membranes, *Xanthobacter* 3251
- waste water
 - amino acids, removal, comparisons 2252
 - ammonia, measurement, instrumentation 3196
 - application to land, review 1169
 - aquatic plants, Morocco 1362
 - autotrophic microorganisms, kinetics 1632
 - biofilms, competition, microorganisms 1176
 - biological filtration, upward flow, reviews 1260
 - biological fixed-film systems, reviews 1278
 - bioreactors
 - biofilms, Norway 1173
 - fluidized beds, biofilms 1197
 - books 3912
 - cells, respiration, oxygen, transfer 3264
 - chemicals, discharges, inhibition, Finland 768
 - denitrification, reviews 1646
 - effluents, irrigation, Kuwait, performance 2363
 - fish ponds, Côte d'Ivoire 1398
 - fluidized beds, anaerobic conditions, biofilms, growth 3822
 - fluidized beds
 - aerobic conditions, biofilms, accumulation 3261
 - sponges, wire netting 2316
 - heterotrophic microorganisms, kinetics 1632
 - mathematical models 338, 340
 - nitrification, reviews 1646
 - phosphorus, removal, mathematical models 3752
- ponds
 - algae, Israel 3341
 - Chlorella vulgaris* 3342
 - mathematical models, kinetics 422
 - pathogens, mortality, mathematical models, Tanzania 2336
 - review 1169
 - reviews 327
 - rotating biological contactors, upgrading 1396
 - saline water, bioreactors, activated sludge, Spain 1665
 - soil fungi 3755
 - synthetic, biomass, entrapment, cellulose acetate 2271
- wetlands
 - China 3332
 - constructed
 - design 1366
 - USA 1352
 - review 1169
- waste water treatment
 - nitrogen, removal, Sweden 2618
 - phosphorus, removal, Sweden 2618
- wastes
 - aerobic treatment, reviews 1209
 - anaerobic digesters, design, India, upland areas 2346
 - books 2794
 - Taiwan 3252
 - toxic substances, biotechnology, books 1865
 - water purification, filters, algae, fouling 3785
 - whey cheese, effluents, bioreactors, anaerobic conditions 2644
- Biological treatment + ozone**, waste water, aromatic compounds, removal 3458
- Biomass**
 - activated sludge, determination, DNA 1154
 - adhesion, plastics, sewage, activated sludge, bioreactors, aeration 1295
 - biogas, production, ecology 3396

Biomass *cont.*

- characterization, methane production, biological filtration, anaerobic treatment 1269
- concentration, bioreactors + filtration, membranes, performance 1195
- conversion, enzymes, fuels, production, books 3914
- decontamination, heavy metals, extraction, nitrilotriacetic acid 3657
- Desulfovibrio desulfuricans*, carbon, estimation, assays, fluorescence microscopy 820
- entrapment, cellulose acetate, waste water, synthetic, biological treatment 2271
- estimation, activated sludge, respiration, rates 409
- evaluation 1198
- formation
 - glass, drinking water 3019
 - teflon, drinking water 3019
- fungi, heavy metals, uptake, reviews 1570
- growth
 - bioreactors, pH, control, techniques, measurement 1181
 - nitrification, kinetics, activated sludge, supports, plastics 1310
 - kinetics, phenolic compounds, caffeic acid, biodegradation, olive oil, production, waste water 2533
- microbial flora, biological fixed-film systems, aerobic conditions, bioreactors, design 3259
- population dynamics, activated sludge, biological fixed-film systems 1156
- production, whey, utilization, *Cluyveromyces marxianus* 705
- reduction, bioreactors, ciliates, grazing 1307
- sorption, effects, dibutyl phthalate, biodegradation 3465
- supports, anaerobic treatment, dimethyl terephthalate, production, waste water, biogas, production 1687
- temperature, pulp mill effluent, organochlorine compounds, removal, biological treatment 1732
- thermal degradation, energy, production, Canada, European Union 2812
- water systems, drainage, microorganisms, population dynamics, aerobic conditions 3824

Biomass production

- molasses, biodegradation, yeasts 711
- soyabeans, wastes, edible fungi 2373
- vinasse
 - utilization
 - Aspergillus niger* 715
 - Cryptococcus laurentii* 715

Biomedical wastes, laboratories, steam sterilization 3063**Biopolymers**, production, *Bacillus* 2733**Bioreactors**

- acid mine drainage
 - aluminium, removal 745
 - copper, removal 745
 - iron, removal 745
 - zinc, removal 745
- activated sludge
 - mathematical models 3322
 - microbial flora, indexes, monitoring 301
 - waste water, saline water, biological treatment, Spain 1665
- aerobic conditions
 - olive oil, production, waste water, biological treatment, Italy 3761
 - organic halogen compounds, biodegradation, pulp mill effluent 1709
- aerobic treatment
 - aerobic treatment, nutrients, removal, mathematical models, optimization 683
 - anaerobic treatment
 - nutrients
 - removal
 - sewage, USA 2627
 - waste water, USA 2627

Bioreactors *cont.*

- aerobic treatment *cont.*
 - 1,2-dichloroethane, biodegradation 1435
 - performance, pig slurry, mathematical models 754
 - wood panels, production, waste water 2680
- aerobic treatment + anaerobic treatment, pulp and paper industry, waste water 1716
- aggregates, waste water, anaerobic treatment, bacteria, distribution 2742
- alkaline pulping, waste water, biological treatment, sludges, granulation 2660
- anaerobes, redox potential, sewage, treatment, techniques, determination 302
- anaerobic conditions
 - phosphorus, removal, waste water 3749
- sludges
 - granular, microbiology characteristics 2730
 - methanogenic, granules, characteristics 2287
 - volatile fatty acids, biodegradation, sulfates, effects 662
 - whey cheese, effluents, biological treatment 2644
- anaerobic digestion
 - sewage sludge, methane production 2352
 - wastes, methane production 2352
- anaerobic treatment
 - aerobic treatment, polyphosphates, accumulation, bacteria, population dynamics 1819
 - aromatic hydrocarbons
 - chlorine
 - biodegradation
 - Dechlorosporium hafniense* 2530
 - Desulfomonile tiedjei* 2530
 - bacteria, polymers 1383
 - biofilms, scanning electron microscopy, inoculum 1222
 - coffee waste 2641
 - fluidized beds, nutrients, removal, waste water 1232
 - ice cream, waste water, biodegradation, kinetics 2645
 - molasses distillers' solubles, biodegradation, Czech Republic 1679
 - piggery effluent, equations 753
 - sewage, biofilms, mathematical models 3274
 - volatile fatty acids, biodegradation, waste water, methane production 2559
 - waste water
 - biofilms, mathematical models 3274
 - synthetic, milk 1681
 - waste waters, sulfate reducing bacteria, methanogens, interactions 1788
 - yeasts, production, waste water 1671
 - anthracenes, biodegradation, polluted soils 323
 - aromatic hydrocarbons
 - biodegradation, polluted soils 323
 - groundwater, bioremediation 1515
 - biofilms
 - electrodes, performance, denitrification, groundwater 1745
 - microbial flora, distribution 2279
 - plastics, adhesion, hydrocarbons, biodegradation 578
 - sewage, biological treatment, Norway 1173
 - solvents, chlorine, biodegradation, microbial flora 2616
 - structure, mass transport, organic compounds, biodegradation, reviews 2284
 - waste water, biological treatment, Norway 1173
 - biogas, desulfurization, *Thiobacillus ferrooxidans* 1595

Bioreactors *cont.*

- biological filtration
 - chloroalkanes, biodegradation, bacteria, strains, biological competition, aerobic conditions 3491
 - chlorobenzenes, biodegradation, bacteria, strains, biological competition, aerobic conditions 3491
 - slaughterhouse waste, biodegradation, anaerobic treatment 2699
- biological treatment, hemp, pulping, waste water, decolorization, *Phanerochaete chrysosporium* 1723
- biomass
 - development, nutrients, removal, sewage 1306
 - growth, pH, control, techniques, measurement 1181
 - reduction, ciliates, grazing 1307
 - brine, biological treatment, halophilic bacteria, USA 2278
- cells
 - immobilization
 - denitrification
 - waste water
 - Paracoccus denitrificans*, determination 1627
 - Pseudomonas*, determination 1627
- Chlamydomonas reinhardtii*, water purification, nitrite, removal 2630
- chlorinated hydrocarbons, biodegradation, anaerobic treatment 3536
- 3-chlorobenzoate, biodegradation, anaerobes 1501
- chromate, reduction, *Pseudomonas* 639
- composting, Canada 376
- cyanobacteria, biomass, production, India 793
- dairy wastes, biodegradation, *Cluyveromyces fragilis* 709
- denitrification, dynamics, mathematical models 2623
- design
 - biological fixed-film systems, aerobic conditions, biomass, microbial flora 3259
 - biological treatment, sewage sludge, primary, fermentation 3258
 - operation 1199
 - 1,3-propanediol, production, *Citrobacter freundii*, immobilization 1415
 - waste water, ethylene dichloride, biodegradation 3416
- 1,2-dichloroethane, biodegradation, granular activated carbon, regeneration, bacteria 1272
- drainage systems, collectors, roads, evaluation 3357
- efficiency, ferrous sulfate, oxidation, *Thiobacillus ferrooxidans* 2607
- Enterobacter cloacae*, chromates, removal, waste water 1666
- fluidized beds
 - biofilms
 - aerobic treatment, chlorophenols, removal, groundwater 2555
 - waste water, biological treatment 1197
 - phenols, removal, pulp mill effluent, biological treatment 1734
 - pulp mill effluent, biological treatment 1733
 - toluene, removal, groundwater, biological treatment 2527
 - waste water treatment, mathematical models, optimization 1279
- granules
 - benzoates
 - biodegradation
 - creosols, inhibition 2552
 - phenols, inhibition 2552
 - groundwater, treatment, trichloroethylene, removal 2426
 - hydraulic residence, sewage, biological treatment, equations, determination 418
 - hydraulics, waste water treatment, mathematical models 335

Bioreactors cont.

- industrial wastes
 - biological treatment, anaerobic treatment, sludges, composition, characteristics 3269
 - waste water treatment, sago 2286
- kinetics, fruit, processing, waste water, anaerobic digestion 436
- landfill leachates, bioremediation 3219
- membranes
 - activated carbon, aerobic treatment, volatile compounds, biodegradation, waste water 2446
 - aluminium, industry, oily waste water, treatment 3802
 - 1,2-dichloroethene, waste water, biodegradation, mathematical models 3411
 - gas permeable, biofilms, growth 1213
- sewage
 - aerobic treatment 344
 - treatment 346
 - waste gases, biological treatment, *Xanthobacter* 3251
- methane production, mass transfer, enhancement 2350
- methanogens, immunology 3859
- methanol, biodegradation, methanogens, acetogens, competition 1229
- microbial contamination, control, dissolved oxygen 2998
- microorganisms
 - immobilization
 - poly(vinyl alcohol), denitrification 1168
 - saponite, methane production, kinetics, palm oil mill effluent, biodegradation, methane production, kinetics 1421
- nitrification
 - biofilms, population dynamics 1631
 - dynamics, mathematical models 2623
 - Nitrobacter agilis*, immobilization, activity, temperature 3832
 - Nitrosomonas europaea*, immobilization, activity, temperature 3832
 - operation 1205
- nitrogen, removal, waste water treatment 1644
- nitrotoluene, biodegradation, aerobes 3450
- optimization, xylose, fermentation, *Pichia stipitis*, ethanol production 549
- organic compounds
 - biodegradation, mathematical models, kinetics 2461
 - removal, paper mill sludge 1736
- pentachlorophenol, biodegradation, *Phanerochaete chrysosporium*, mathematical models 3592
- performance
 - kinetics, slaughterhouse waste, biological treatment 2698
 - microbial flora, biomass, kinetics 1215
 - propionate, biodegradation, waste water, *Methanothrix*, granules 1228
 - waste water treatment, nitrification 1624
- phenolic compounds, biodegradation, pulp mill effluent, anaerobic treatment, aerobic treatment 1699
- phenols
 - biodegradation, waste water, saline water, oilfields, biological treatment, bacteria, halophiles, USA 1694
 - waste water, biodegradation, sludges, granules, characteristics, *Methanothrix* 2551
- phosphorus, removal, activated sludge 1659
- pig manure, biodegradation, mathematical models, temperature, kinetics 1766
- piggery effluent, anaerobic treatment, methane production 1765
- polluted soils, bioremediation 3219
- polluted water, trichloroethylene 3463
- Pseudomonas fluorescens*, predation, *Tetrahymena pyriformis* 1307

Bioreactors cont.

- quinoline, biodegradation, *Comamonas acidovorans*, immobilization, glass, beads 3616
- Rhizopus oryzae*, cadmium, removal, waste water 1583
- sequencing batch reactors, waste treatment, anaerobic treatment 2288
- sewage
 - anaerobic treatment
 - Colombia 2285
 - Egypt 2285
 - biological treatment 1237
 - carbon, removal 2626
 - nitrogen, removal 2626
- sewage sludge, anaerobic treatment, aerobic treatment, redox potential, monitoring 1378
- sludges
 - anaerobic treatment, aerobic treatment, redox potential, monitoring 1378
 - bacteria, isolation, methyl *t*-butyl ether, biodegradation 3543
 - granular, formation, denitrification, drinking water 1742
 - granules, denitrification, drinking water 3790
 - slurries, petroleum hydrocarbons, soil, biodegradation 3232
 - submerged, sewage, biological treatment, upgrading, Germany 1626
 - substrates, microbial degradation, mathematical models 1200
 - sulfates, reduction, sulfate reducing bacteria 2603
 - sulfur, oxidation, *Thiobacillus*, oxygen, effects 3689
- technology, waste water treatment 2283
- trichloroethylene
 - biodegradation
 - Alcaligenes eutrophus* 3474
 - Methylosinus trichosporium*, models 3565
 - Pseudomonas cepacia*, mathematical models 3475
- waste paper, hydrolysis, *Pseudomonas fluorescens*, cellulase 3773
- waste water
 - aerobic treatment
 - microorganisms
 - aerobes 3257
 - anaerobes 3257
 - anaerobic treatment 348
 - microorganisms
 - aerobes 3257
 - anaerobes 3257
 - characteristics, techniques, determination, respirometry 1304
- waste water treatment
 - aerobic treatment
 - bacteria
 - characterization 343
 - identification 343
 - biofilms
 - detachment, dynamics, mathematical models 2272
 - formation 2281
 - denitrification, *Pseudomonas denitrificans*, models 2624
 - microbial flora, characterization, Germany 400

Bioreactors + filtration, membranes, biomass, concentration, performance 1195**Bioreactors+biofilms**

- sewage, waste water treatment, nitrification, Norway 2276
- waste water treatment, nitrogen, removal 2629

Bioremediation

- aliphatic hydrocarbons
 - soil pollution, reviews 3207
 - water pollution, reviews 3207
- aquifers, pollution, *Pseudomonas*, USA 1162
- aromatic compounds, biodegradation, environment, aerobes + anaerobes 2268
- aromatic hydrocarbons
 - biodegradation, aquifers, USA 562
 - groundwater, bioreactors 1515

Bioremediation cont.

- biosurfactants, reviews 2578
- bioventing
 - diesel oil, oil spills, Australia 3241
 - fuel oils, oil spills, USA 3240
 - petroleum hydrocarbons, polluted soils 3239
- books 2806
- USA 2811
- cadmium
 - polluted soils
 - Silene vulgaris* 1164
 - Thlaspi caerulescens* 1164
- chloroform, biodegradation, groundwater 498
- contaminated land, reviews 284
- 1,2-dichloroethylene, groundwater 2431
- dichloromethane, biodegradation, groundwater 498
- diesel oil
 - polluted soils 319, 3230
 - Antarctica 3229
 - USA 316
- effects, polluted soils, hydrocarbons, toxicity, soil flora 3237
- environmental degradation, techniques, instrumentation, membranes 3212
- evaluation, hydrocarbons, biodegradation, fungi, marine environment 3563
- explosives, sediment, composting, USA 2617
- field tests, evaluation, pollution 3203
- fuel oils
 - biodegradation
 - polluted soils
 - actinomycetales, Arab countries 2502
 - cyanobacteria, Arab countries 2502
 - fungi, Arab countries 2502
 - polluted soils 3230
 - Antarctica 3229
 - storage, caves, soil pollution, heterotrophic microorganisms, aerobes, Germany 1688
- groundwater
 - pollutants, removal, mathematical models 3226
 - pollution, reviews 309
- heavy metals
 - polluted soils, surfactants, microorganisms, production 3651
- removal
 - polluted soils
 - Canada 1166
 - USA 1166
 - soil, macrophytes 3668
 - water, reviews 3655
 - hydrocarbons, biodegradation, polluted soils, models, evaluation 3225
- in situ*, contaminants, desorption, groundwater, mathematical models 315
- industrial sites, pollution, USA 317
- ketones, biodegradation, polluted soils 530
- land, contamination 325
- landfill leachates, bioreactors 3219
- metals, techniques 3221
- methodology, hydrocarbons, polluted soils, USA, California 320
- mine spoil, Australia 3217
- mine tailings, Australia 3217
- mined land, Australia 3217
- naphthalene, biodegradation, polluted soils 530
- oil refinery wastes
 - biodegradation
 - polluted soils
 - actinomycetales, Arab countries 2502
 - cyanobacteria, Arab countries 2502
 - fungi, Arab countries 2502
- oil spills 3206
- Exxon Valdez, USA 559
- marine environment 3214
- soil bacteria 569
- organic compounds
 - biodegradation, microbial flora, selection 510

Bioremediation *cont.*organic compounds *cont.*

removal

groundwater 1160

polluted soils

Canada 1166

USA 1166

techniques 3221

pesticides, biodegradation, polluted soils, Germany 3242

petroleum, soil, reviews 3540

petroleum hydrocarbons

polluted soils, reviews 3218

sludges, polluted soils, techniques, assessment, toxicity 2267

soil pollution, reviews 3207

water pollution, reviews 3207

polluted soils 1165

aromatic hydrocarbons 3236

bioreactors 3219

biotechnology 3235

books 832

hydrocarbons 3234

Netherlands 3215

pesticides, mushroom compost 3243

petroleum, surfactants 633

Phanerochaete chrysosporium 2260

reviews 284, 309, 3244

polluted water 593

books 832

lead, removal, *Eichhornia crassipes* 2588*Phanerochaete chrysosporium* 2260

pollution

biochemistry 308

chlorinated hydrocarbons, soil, USA 2265

chromium

soil, reviews 648

water, reviews 648

ecology 308

hydrocarbons, books 2793

oil refinery wastes, bacteria, characterization, Germany 3209

petroleum hydrocarbons

reviews 3204

soil

composts 2270

models 3238

polycyclic hydrocarbons, reviews 2259

reviews 3213, 3231

toxic substances, books 2796

trichloroethylene, groundwater, nitrogen, phosphorus, USA 2263

trinitrotoluene, soil, anaerobic conditions, USA 2269

polychlorinated biphenyls, soil, thermal desorption, effects 3599

polycyclic hydrocarbons

biodegradation

microorganisms

soil

sorption, extraction 3490

transport processes, extraction 3490

soil, *Mycobacterium* 2264

porphyrins, reviews 3208

radioactive wastes, caesium, *Chlorella salina*, salinity 2262

reed beds, aquatic plants, reviews 1843

reviews 3210

sediment

contamination

organic compounds

Belgium 3211

Netherlands 3211

soil

aromatic hydrocarbons, biodegradation, microorganisms 3494

organochlorine compounds, biodegradation, microorganisms 3494

soil pollution

heavy metals, plants, uptake 2589

spent mushroom compost 2266

technology, polluted soils, USA 326

tetradecane, biodegradation, polluted soils 530

Bioremediation *cont.*

toxic substances

biodegradation, aquatic environment

314

books 2813

environment, USA 310

groundwater, contamination, Germany 313

1,1,1-trichloroethane, biodegradation, groundwater 498

trichloroethylene, contamination, groundwater, *Methylosinus trichosporium* 3223

vegetation, management, selenium, polluted soils, USA 3695

waste water

heavy metals

aquifers, Mexico 3216

mineral oils, Mexico 3216

wastes, books 2813

water pollution, chlorinated hydrocarbons, bacteria 312

zinc

polluted soils

Silene vulgaris 1164*Thlaspi caerulescens* 1164**Biosensors+*Bacillus licheniformis***, efficiency, waste water, biochemical oxygen demand, measurement, heavy metals 1149**Biosurfactants**

bioremediation, reviews 2578

effects, octadecane, biodegradation,

Pseudomonas aeruginosa 3553lichenysin A, production, *Bacillus**licheniformis*, salinity 3638lipids, production, aliphatic hydrocarbons, biodegradation, *Candida antarctica*,

cerulenin, inhibition 2459

production

Bacillus licheniformis, culture media, optimization 1551characterization, *Geotrichum**candidum* 3876*Geotrichum candidum* 3875

molasses, utilization, microorganisms 2377

potato waste, utilization, microorganisms, mathematical models 2385

Biotechnologyacrylamides, production, *Rhodococcus**rhodochrous*, enzymes 771

industrial wastes, treatment, reviews 693

lignocellulosic wastes, biodegradation, reviews 534

microorganisms, adhesion, surfaces, reviews 3823

polluted soils, bioremediation 3235

surfactants, production, bacteria, reviews 3546

wastes, toxic substances, biological treatment, books 1865

Biphenyl

biodegradation

bacteria, characterization, soil, pollution 3484

Comamonas testosteroni, genetics 790*Pseudomonas*, enzymes 585**Biphenyls**

biodegradation

Alcaligenes eutrophus, genetics 2427

microorganisms, soil, surfactants, effects 3572

Bipolaris, antifouling agents, production 2134**Biscuits**, biodeterioration, fungi, Egypt 83***Bjerkandera***

lignin, biodegradation, enzymes 3881

ligninolytic microorganisms 3182

polycyclic hydrocarbons, biodegradation, peroxidases 1471

species

anthracene, biodegradation, characterization, optimization 3561

benzo-a-pyrene, biodegradation, characterization, optimization 3561

veratryl alcohol, regulation, manganese, lignin peroxidase, activity 3182

Blood, *Aeromonas*, phenotypes, distribution, Finland 2830**Blooms**, formation, bacteria, pigments, absorption, characteristics, determination 272**Boats**

fishing

biofouling

Balanus amphritrite, Taiwan 3040*Dexiospira*, Taiwan 3040*Tanais caolinii*, Taiwan 3040**Books***Aspergillus* 2805

biocides, bacterial products 831

biodegradation, biochemistry 2809

biomass, conversion, enzymes, fuels, production 3914

bioremediation, USA 2811

characterization

enzymes 2814

microorganisms 2814

climatic change, environmental impact 834

contaminated land, bioremediation 284

detection

enzymes 2814

microorganisms 2814

environmental impact, assessment, wastes, management 275

food, preservation, antiseptic agents 2799

food industry, environmental impact 2800

metals

bacterial leaching 2804

microbial corrosion 2804

microbial corrosion 2803

microorganisms

detection, mass spectrometry 2810

identification, mass spectrometry 2810

milk, pathogens 238, 833

polluted soils, bioremediation 284, 832

polluted water, bioremediation 832

pollution

control, wastes, reduction 308, 327, 506, 708, 829

hydrocarbons, bioremediation 2793

toxic substances, bioremediation 2796

polymers, biodegradation 1540-1541, 1548-1549

sewage

biological treatment 3912

waste treatment, anaerobic digestion 2798

sewage sludge, methane production, utilization 2801

shellfish, microbial contamination, indicators 830

sludge disposal

Europe 835

North America 835

sludges, utilization 2792

spa pools, hygiene 2802

surfactants, biodegradation 2795

toxic substances

biodegradation 2813

bioremediation 2813

waste treatment, information, world 3913

waste water

biological treatment 3912

nitrogen, removal 1278, 1298, 1646-1648, 1867

waste water treatment 2280, 2313, 2618, 2634, 2797

Europe 835

North America 835

technology 2808

wastes

biodegradation 2813

biological treatment 2794

bioremediation 2813

composting, USA 2807

information, world 3913

methane production, utilization 2801

toxic substances, biological treatment, biotechnology 1865

water pollution

Europe 835

North America 835

water supply

Europe 835

North America 835

Botryodiplodia, melons, microbial contamination, control 1926

Botrytis cinerea, apples, storage decay 106

Botrylococcus braunii

growth

nitrogen, uptake, sewage 1839

phosphorus, uptake, sewage 1839

Bottled water

contamination

Pseudomonas aeruginosa, detection, Canada 917

Salmonella, detection, Canada 917

mineral waters, microbial contamination, Enterobacteriaceae, Germany 2887

packaging materials, bacteria, interactions, Italy 2886

springs (water), microbial contamination, Enterobacteriaceae, Germany 2887

Brachionus calyciflorus, growth, waste

water treatment, ponds 3767

Brackish water, pathogens, survival, sewage, treatment, stabilization basins, pH 294

Bradyrhizobium

enzymes, organophosphorus pesticides,

biodegradation, soil 625

rock phosphate, solubility 1592

Brassica juncea

roots

heavy metals, water, removal 3228

uptake, heavy metals, soil, removal

3220

Brazil

Sao Paulo, oysters, *Vibrios* 2024

beef

dried meat

microbial flora, bacterial count

2039

Staphylococcus, bacterial count

2040

chickens, carcasses, pathogens 2064

cypermethrin, residues, biodegradation,

biological activity in soil 2570

feeds, contamination, fungi 72

maize, storage, microbial contamination,

Aspergillus, aflatoxins 2934

Paraiba, sea water, pollution, *Escherichia*

coli 2234

sewage, microbial contamination,

rotavirus 3364

surface water, microbial contamination,

rotavirus 3364

water, coliphages, detection 1119

Brazil nuts, aflatoxins, determination 1959

Bread

Clostridium sporogenes, spores, survival,

baking, storage 1982

spoilage

Bacillus, differentiation 1981

moulds, control 1980

Brewery effluent

aerobic treatment, activated sludge,

design, performance 3762

biological treatment

aerobic conditions, temperature 1674

anaerobic digesters, design, bacteria,

granules 1663

fermentation, polysaccharides, production

450

waste water treatment, anaerobic diges-

tion, kinetics 703

Brine

acidification, mushrooms, canned prod-

ucts, *Bacillus stearothermophilus*,

spores, heat resistance, control 925

biological treatment, bioreactors, halophi-

lic bacteria, USA 2278

fish, storage, microbial contamination

115

wastes, nitrates, removal, bacteria, immo-

bilization 3720

Brochothrix thermosphacta

control, beef, carcasses, nisin, sprays 967

inhibition, *Lactobacillus acidophilus*,

bacteriocins 1061

meat, packaging, plastic film 2046

sausages, spoilage, detection, antibodies,

UK 2058

Broilers

carcasses

abattoirs, processing, microbial con-

tamination, Kuwait 2074

bacteria, recovery, temperature, stor-

age, effects 990

reprocessing, microbial contamina-

tion, control 2992

Bromoalkanes, biodegradation,

Pseudomonas 2507

Bromoxynil, biodegradation, *Agrobacterium*

radiobacter 2574

Bromus inermis, silage making, microwave

radiation 2690

Brunei, dinoflagellates, toxins, red tides,

fisheries, effects 952

Buffalow meat, low temperature storage,

radiation, microbial flora, control 220

Building materials

biodeterioration

Belgium 2125

colonization 2115

Buildings

air, microbial contamination, detection,

Spain 1872

biodeterioration

Ailanthus altissima, roots, Portugal

3024

colonization 2115

Bulgaria

dimethyl phthalate

biodegradation

microorganisms

sewage sludge 2408

soil 2408-2409

Burundi, cassava, *Penicillium verrucosum*,

mycotoxins, isolation 61

1,2-Butanediol, biodegradation, 2-hydrox-

ybutyric acid, production, *Rhodococcus*

3381

1,3-Butanediol, biodegradation, polyhydrox-

yalkanoic acids, production,

Pseudomonas 1443

Butanediol, production, fermentation, bacte-

ria, reviews 2473

2,3-Butanedione, biodegradation, *Saccharo-*

myces cerevisiae 1677

Butanol

production

Clostridium acetobutylicum, pH 777

potato waste, utilization, *Clostridium*

acetobutylicum 541

Butter

contamination, *Escherichia coli*, resis-

tance, antibiotics, Iran 2996

fatty acids

moulds 2086

yeasts 2086

microbial contamination, determination,

Pakistan 176

Pseudomonas aeruginosa, enterotoxins,

production 157

Butyrate

biodegradation

anaerobic treatment

bacteria, electron transfer 3469

methane production 2401

Desulfobacterium ceticum, bio-

chemical pathways 3485

Butyric acid, effect, anaerobic conditions,

propionic acid, biodegradation, *Metha-*

nobacterium thermoautotrophicum 3488

Byssochlamys, acrylic acid, biodegradation,

β -hydroxypropionic acid, production

466

Cabbages

modified atmosphere storage, *Listeria*

innocua, control 2009

storage decay, *Phytophthora porri*, USA

111

Cadmium

adsorption, waste water, activated sludge

1580

bioaccumulation, industrial wastes,

Streptomyces griseus, *Streptomyces*

clavuligerus 647

electroplating waste water, starch,

biodegradation, anaerobes, methane

inhibitors 1221

Cadmium cont.

extraction

biomass, decontamination, nitrilo-

triacetic acid 3657

Pseudomonas fluorescens, decontami-

nation, nitrilotriacetic acid 3657

methane production, inhibition, anaerobic

digestion 3661

polluted soils

bioremediation

Silene vulgaris 1164

Thlaspi caerulescens 1164

precipitation, *Clostridium thermoaceticum*

3673

removal

aquifers, sand, bacteria, polymers 645

Bacillus subtilis 3660

waste water, *Rhizopus oryzae*,

bioreactors 1583

sorption

fungi, biomass 3665

heavy metals, *Chlorella fusca*, cell

walls, cells 1587

uptake

Ascomyllum nodosum, alginates,

leaching, effects 1574

Eichhornia crassipes, rivers,

Zimbabwe 2587

Saccharomyces cerevisiae 644

Vallisneria spiralis, uptake 2595

zinc, uptake, *Saccharomyces cerevisiae*

2767

Caesium

sorption

Rhodococcus, soil, bioaccumulation

3662

Rhodococcus erythropolis, soil, bioac-

cumulation 3662

uptake, toxicity, microorganisms, reviews

3676

Caffeic acid, foods, *Clostridium botulinum*,

spores, inhibition 1032

Caffeine, biodegradation, coffee pulp, fungi,

isolation, characterization 2415

Calamagrostis arundinacea

decay

fungi

distribution, Poland 2100

new species, Poland 2216

Calcareous rocks, biodeterioration, fungi,

Mediterranean 2120

Calcium, waste water treatment, anaerobic

digesters, biofilms, development 3344

Caldicellulosiruptor lactoaceticus

new species

thermal springs

characterization, cellulolytic

microorganisms 2724

isolation, cellulolytic microorga-

nisms 2724

Caldocellum saccharolyticum, gene transfer,

xylanase, production, *Saccharomyces*

cerevisiae, genetic improvement 1831

Callosobruchus chinensis

control, gamma radiation, grain legumes

2144

pulses, stored products pests 906

Campylobacter

chickens, carcasses, Brazil 2064

contamination, sewage + poultry, abat-

toirs, effluents, biological treatment,

Netherlands, surveys 292

control

poultry, carcasses, trisodium

phosphate 994

poultry meat, irradiation 2072

epidemiology 246

foodborne diseases, USA 3101

food, contamination, Netherlands 7

food poisoning, Europe 247

foods, isolation 33

microbial contamination, poultry, car-

casses, trisodium phosphate, wash-

ing, control 2986

oxygen tolerance, growing media, assess-

ment 2185

pigs

carcasses

abattoirs, equipment, contamina-

tion, Canada 1025

Trinidad and Tobago 2051

Campylobacter *cont.*

- poultry meat
 - assessment, nucleic acids, hybridization, USA 871
 - isolation 33
 - serotypes, immunological techniques 246
 - sewage sludge, detection 1858
 - waste water, techniques, isolation 3193

Campylobacter coli

- chicken meat, contamination, UK, Northern Ireland 995
- control, lactic acid, pigs, carcasses 979
- ecology, pathogenicity, epidemiology 3102
- identification, DNA amplification 2186
- meat, monitoring, reviews, USA 2818
- polluted water, poultry farming, detection 3894
- poultry, monitoring, reviews, USA 2818
- water, detection, polymerase chain reaction 821
- water supply, poultry farming, detection 3894

Campylobacter jejuni

- chicken meat, contamination, UK, Northern Ireland 995
- ecology, pathogenicity, epidemiology 3102
- foodborne diseases, reviews 1108
- foods, USA 2816
- identification, DNA amplification 2186
- meat, monitoring, reviews, USA 2818
- milk
 - contamination, techniques, isolation, culture media 160
 - reviews 168
- polluted water, poultry farming, detection 3894
- poultry
 - microbial contamination, health hazards 2069
 - monitoring, reviews, USA 2818
- survival
 - papaya, slicing 930
 - sausages
 - cold storage 984
 - production 984
 - vacuum packaging 984
 - watermelon, slicing 930
- water, detection, polymerase chain reaction 821
- water supply, poultry farming, detection 3894

Campylobacter lari, identification, DNA amplification 2186**Canada**

- Alberta
 - sewage, treatment, lagoons, performance, cold zones, ice 2341
 - beef, carcasses, abattoirs, microbial contamination, detection, statistical analysis 2045
- British Columbia, polycyclic hydrocarbons, biodegradation, microorganisms, isolation, marine environment 1492
- Montreal, water purification, techniques, water quality, coliform count, waterborne diseases 2891
- Ontario
 - composts, bacteria, enumeration, identification 2296
 - Escherichia coli*, microbial contamination, rivers 1136
 - faecal coliforms, microbial contamination, rivers 1136
 - food waste, waste paper, composting 370
 - Pseudomonas aeruginosa*, microbial contamination, rivers 1136
 - rivers, microbial contamination, indicator species, mathematical models 1126
- biogeography, *Alexandrium*, toxins, production, marine environment 2222
- bottled water
 - contamination
 - Pseudomonas aeruginosa*, detection 917
 - Salmonella*, detection 917
- composting, bioreactors 376

Canada *cont.*

- copper, mine tailings, bacterial leaching, *Thiobacillus ferrooxidans*, lipopolysaccharides 2672
- diatom
 - blooms
 - estuaries 2229
 - rivers 2229
 - drinking water, disinfection, pathogens, removal 2841
 - European Union, biomass, thermal degradation, energy, production 2812
 - food processing, wastes, composting 3288
 - food wastes, composting 359
 - foods, *Salmonella*, detection, immunodiffusion tests 1934
 - groundwater, microbial contamination, farms 2230
 - heavy metals, removal, polluted soils, bioremediation 1166
 - lakes, water supply, bacterial toxins, mycocylin, *Microcystis aeruginosa* 3151
 - meat, *Salmonella*, detection, immunodiffusion tests 1934
 - microcystins, production, cyanobacteria, fresh water, bioassays 3095
 - organic compounds, removal, polluted soils, bioremediation 1166
 - pulp and paper industry, effluents, biological treatment, activated sludge 2653-2654
 - pulp mill effluent, biological treatment, comparisons 1703
 - sausages, *Listeria monocytogenes* 146
 - sewage
 - biological treatment, comparisons 1211
 - low strength, biological treatment, wetlands, constructed 1337
 - water supply
 - microbial contamination
 - Cryptosporidium* 2841
 - Giardia* 2841
- Candida*, catheters, silicon, contamination, antibiotics, resistance 3020
- Candida antarctica*, aliphatic hydrocarbons, biodegradation, biosurfactants, lipids, production, cerulenin, inhibition 2459
- Candida guilliermondii*
 - agricultural wastes, utilization, xylitol production 2474
 - xylose, reduction 2566
- Candida kefyr*, whey, fermentation, aeration, ethanol, production 3382
- Candida maltosa*, nonionic surfactants, biodegradation, textile industry, wastewater 3579
- Candida parapsilosis*, xylose, reduction 2566
- Candida pseudotropicalis*, whey, utilization, ethanol production, models, kinetics 473
- Candida shehatae* (see *Pichia stipitis*)
- Candida tropicalis*
 - alkanes, biodegradation, isocitrate dehydrogenase, characteristics 2514
 - enzymes, alkanes, biodegradation, dicarboxylic acids, production 504
 - palm oils, utilization, proteins, production 457
 - petroleum hydrocarbons, biodegradation, emulsifiers, production 2500
 - phenolic compounds, biodegradation 2540
 - silicone rubber, biodeterioration, biofilms 3009
- Candida utilis*, wheat straw, utilization, single cell protein, production 458
- Cane sugar**, waste water, biological treatment, methane production, India 713
- Canned products**, processing, *Clostridium sporogenes*, survival, heat treatment, India 2002
- Carbazole**
 - biodegradation
 - bacteria
 - biphenyl 2,3-dioxygenase 3507
 - naphthalene 1,2-dioxygenase 3507
 - Pseudomonas* 1447

Carbofuran, biodegradation, soil, bacteria, techniques, isolation, phenotypic stability 1562

Carbohydrates

- biodegradation, waste water, activated sludge, α -amylase, enzyme activity 2710
- catabolism, *Pseudomonas aeruginosa*, enzymes, genetics 779
- fermentation
 - Archaea*, marine environment, USA 514
 - thermophilic microorganisms, marine environment, USA 514
- mannans, utilization, coconuts, waste, *Bacillus subtilis*, mannanase, production 2383
- waste water, anaerobic treatment, design, performance, costs 1219

Carbon, removal, sewage, bioreactors 2626**Carbon dioxide**

- biodegradation, ethylene, production, *Pseudomonas syringae*, gene transfer, *Synechococcus*, gene expression 1786
- fixation, power stations, waste gases, algae 3886
- foods, modified atmosphere storage, reviews 1925
- measurement, organic compounds, biodegradation, microorganisms, soil 3495

removal

- biogas, *Arthospira* 483
- sorghum, biodegradation, methane production, anaerobic digesters 486

Carbon dioxide + hydrogen, alkanes, production, *Desulfovibrio desulfuricans* 3825**Carbon monoxide**, metabolism, anaerobes, microbial physiology, reviews 1594**Carbon tetrachloride**

- biodegradation
 - anaerobic treatment, substrates, ions 2460
 - microorganisms
 - experimental design, USA 511
 - mathematical models 663
 - nitrogen, inhibition, kinetics 3415
 - nitrites, microorganisms 526
- Pseudomonas* 2450

Carbonate, chlorinated phenols, biodegradation, microorganisms, sediment 3596**3-Carbonyl butanoate**, biodegradation, *Geotrichum*, enzymes, chemical properties, effects 3486**3-Carboxydiphenyl ether**, biodegradation, *Pseudomonas pseudoalcaligenes*, dioxigenase, genetics 2447**4-Carboxydiphenyl ether**, biodegradation, *Pseudomonas pseudoalcaligenes*, dioxigenase, genetics 2447**Carboxylic acids**

- production, sewage sludge, bacteria, biodegradation, aerobic treatment 341
- turkey meat, *Clostridium botulinum*, control 996
- utilization, *Alcaligenes eutrophus*, polyesters, production 472

Carcass disposal, poultry, composting, viruses, survival 1771**Carcasses**, pigmeat, microbial flora, water reuse 974**Carnobacterium**

- characterization, pyrolysis, mass spectrometry 2205
- fish
 - vacuum packaging
 - histamine, synthesis, keeping quality 953
 - tyramine, synthesis, keeping quality 953
- meat, identification, RNA probes 128

Carnobacterium divergens

- control, beef, carcasses, nisin, sprays 967
- fish products, bacteriocins, production 2167

Carnobacterium piscicola, fish products, bacteriocins, production 2167

- Carobs**, pods, fermentation, ethanol production, *Saccharomyces cerevisiae* 1416
- Carrageenan**, bacteria, estimation 885
- Carrot juice**
cheeses, *Listeria monocytogenes*, control 2156
lettuces, *Listeria monocytogenes*, control 2156
sausages, *Listeria monocytogenes*, control 2156
- Carrots**
antimicrobial properties 216
microbial contamination, storage 104
processing, microbial flora, Italy 2001
- Cassava**
fermentation, *Rhizopus*, glucoamylase, production 1406
Penicillium verrucosum, mycotoxins, isolation, Burundi 61
- Catechin**, biodegradation, tannery waste, *Pseudomonas solanacearum*, enzymes, production 3783
- Catechol**
biodegradation
Pseudomonas cepacia 1490
Pseudomonas putida, enzymes, DNA sequencing 594
- Catheters**
bacteria, adhesion, control, silver 2126
materials, microbial contamination, control, protective coatings, cooper + silver 2129
silicon, contamination, *Candida*, antibiotics, resistance 3020
- Cations**
chemical properties, sorption, ion exchange, *Thisopus arrhizus* 3669
release, copper, uptake, *Saccharomyces cerevisiae* 807
- Cattle dung**, anaerobic digesters, microbial flora 2682
- Cattle manure**
anaerobic digestion
gases, pressure, effects, mathematical models 3347
metals, methane production, India 1390
temperature 2684
biogas, production, anaerobic digesters, design, India, temperature, effects 1762
biological treatment, anaerobic digesters, design, biogas, production, India 2355
methane production, anaerobic digestion 3806
recycling, vermiculture 3359
- Cattle manure+plant residues**, anaerobic digesters, design, operation 1388
- Cattle slurry**, composting, UK, reviews 1256
- Cattle slurry+rice straw**, anaerobic digestion, methane production 3803
- Cattle slurry+wheat straw**, anaerobic digestion, methane production 3803
- Cauliflowers**, microbial contamination, storage 104
- α -Cedrene**, oxidation, *Rhodococcus* (bacteria) 2398
- Cell cultures**, immobilization, amides, biodegradation, *Pseudomonas* 1456
- Cell growth**, inhibition, fatty acids, *Bacillus cereus* 1048
- Cell walls**, copper, adsorption, *Bacillus subtilis*, binding, efficiency 1158
- Cellulobiose**
biodegradation, *Clostridium*, xylanase, production 2736
utilization
cellulase, production, *Clostridium thermocellum* 540
ethanol production, *Kluyveromyces marxianus* 1466
- Cells**, respiration, waste water, biological treatment, oxygen, transfer 3264
- Cellulolytic microorganisms**
Aspergillus oryzae 538
Bacillus subtilis 1785
bacteria 2469
enzymes, cellulase, cellosomes 1789
- Cellulolytic microorganisms cont.**
Cellulomonas 806
Cellulomonas flavigena 2481
Clostridium 455, 3509
Clostridium aldrichii 1818
Clostridium hobsonii, new species 2711
Clostridium papyrosolvens 2490
Clostridium thermocellum 798, 1409, 1790
Coniophora puteana 536-537
Coprinus cinereus 1464
Eubacteria 698
Eubacterium 455, 2391, 3509
Geotrichum 1835
Lasiobolium orbicularis 1830
Methanobrevibacter 2391
Myrothecium verrucaria 1785
Neocallimastix frontalis 1460
Penicillium pinophilum 1460
Phanerochaete chrysosporium 557
Pleurotus ostreatus 532
Pleurotus sajor-caju 1464
Pseudomonas cellulosa 2740
Schizophyllum commune 538
soil, detection, culture media 3892
Sporotrichum 462
Sporotrichum thermophile 2755
Sporotrichum thermophilum 1472
Streptomyces reticuli 2747
thermal springs
Caldicellulosiruptor lactoaceticus
new species
characterization 2724
isolation 2724
Trichoderma koningii 547, 1460
Trichoderma longibrachiatum 462, 538, 804, 1464, 2768
Trichoderma reesei 545, 1785
Trichoderma viride 556, 1464, 1475
wood destroying fungi 556
- Cellulolytic moulds + yeasts**, apple pomace, proteins, enrichment, culture techniques 2371
- Cellulomonas**
cellulase
cloning 806
nucleotide sequences 806
- Cellulomonas flavigena**
mutants, sugarcane bagasse, utilization, isolation 2481
Xanthomonas, growth, interactions, sugarcane bagasse, utilization 699
- Cellulose**
biodegradation
Bacillus, soil, termites, infestation 3527
bacteria, enzymes 2469
cellulase, production, *Streptomyces hygroscopicus* 3523
Clostridium cellulolyticum 3537
Clostridium hobsonii, new species, isolation, characterization 2711
Clostridium papyrosolvens, cellulase, xylanases 2490
Clostridium thermocellum
cellulase, production 2475
cellosomes, cellulase 1790
fungi, isolation, arid soils, Algeria 1830
hydrogen, production, anaerobes 2492
landfills, wastes, bacteria, differentiation 3509
maize cobs, pretreatment, sodium hydroxide, bacteria, single cell protein, production 3511
Neocallimastix frontalis + *Penicillium pinophilum*, enzymes, synergism 1460
Phanerochaete chrysosporium
cellobiose dehydrogenase, production 2759
cellobiose hydrogenase 2482
enzymes, reviews 557
glucosidases, production 2759
proteases, production 2759
Piromonas communis, cellulase 3884
Pseudomonas cellulosa
amylases 2484
characterization 2740
soil, microbial flora, herbicides, inhibition 558
- Cellulose cont.**
biodegradation cont.
Spirochaeta thermophila 794
Sporotrichum thermophile, glucosidases 2755
Sporotrichum thermophilum, enzymes, production 1472
Streptomyces, cellulase, activity 3512
Streptomyces reticuli, enzymes 2747
Trichoderma koningii, enzymes, synergism 1460
Trichoderma longibrachiatum, enzymes 552
Trichoderma reesei, cellulases 545
Trichoderma viride 3539
cellulase, properties 1475
xylanase, production, *Trichoderma reesei* 535
- hydrolysis
cellulase, kinetics 2483
Trichoderma koningii, enzymes, genetics 547
pulp, production, wheat straw, biodegradation, waste water treatment, anaerobic digestion 551
saccharification, ethanol production, *Kluyveromyces marxianus* 3530
utilization, ethanol production, *Clostridium thermocellum*, metabolic inhibitors 1409
- Cellulosic wastes**
biodegradation
anaerobic digesters
Methanobacterium thermoautotrophicum, morphology 3860
Methanosarcina maezi, morphology 3860
ethanol production, USA 2498
methane production, anaerobic digesters, operation, monitoring 3398
Streptomyces, cellulase, activity 3512
fermentation
Clostridium, hydrogen, production 2478
fungi 2476
- Central Europe**, waste water treatment, management 1147
- Cereal products**
contamination
aflatoxins, Nigeria 903
fumonisin, Italy 904
fumonisins, detection 895
- Cereals**
fermentation, pathogens, inhibition, variation, Tanzania 2946
Fusarium, fumonisins, production, Spain 1973
- Ceriporiopsis subvermispora**, alachlor, biodegradation 624
- Cerulein**, inhibition, aliphatic hydrocarbons, biodegradation, biosurfactants, lipids, production, *Candida antarctica* 2459
- Chaetomium globosum**, xylanase, production 1827
- Cheeses**
aflatoxins, production, *Aspergillus flavus* 706
Bacillus macerans, histamine, production 1009
bacteria, determination, Spain 2088
camembert cheese, *Listeria monocytogenes*, survival, irradiation 181
contamination, *Escherichia coli*, resistance, antibiotics, Iran 2996
Enterococcus, *Streptococcus*, enumeration 2906
fermentation, *Micrococcus* 1010
Listeria monocytogenes
control, carrot juice 2156
detection 2090
microbial contamination
bacteria 178
Irish Republic 2093
microbial flora, survival, sodium chloride 2087
moulds, determination, Spain 2088
pathogens, reviews 177
production, *Listeria monocytogenes*, inhibition, nisin 2089
yeasts, determination, Spain 2088

- Chelatobacter**, nitrilotriacetic acid, biodegradation, taxonomy 3421
- Chelatobacter heintzii**
distribution
aquatic environment 3836
sewage treatment plants 3836
- Chelatococcus**, nitrilotriacetic acid, biodegradation, taxonomy 3421
- Chelatococcus asaccharovorans**
distribution
aquatic environment 3836
sewage treatment plants 3836
- Chemical industry**
waste treatment, reviews 1686
waste water
anaerobic conditions 1664
biological treatment
bioreactors, comparisons 3771
Israel 1690
phenols, removal, activated sludge 601
- Chemical oxygen demand**
mass balances, activated sludge 403
reduction, whey, fermentation, waste water, *Yarrowia lipolytica* 705
removal
pulp mill effluent, biological fixed-film systems 1708
slaughterhouse waste, biological treatment, activated sludge, nitrification 3816
- Chemical treatment+biological treatment**, textile industry, waste water 3782
- Chemicals**
biodegradation
aerobic treatment, mathematical models 304
assessment, mathematical models 2244
kinetics, mathematical models 2246
soil, assessment 1459
techniques, determination, comparisons 1423
tests, comparisons 1151
water, assessment 1459
discharges, inhibition, waste water, biological treatment, Finland 768
- Chemolithotrophic bacteria**, sulfur + ferric hydroxide, metabolism, sulfates, production, sediment, marine environment 3692
- Cherries**
postharvest decay
Alternaria 107
Aureobasidium pullulans 107
Cladosporium 107
- Chicken**, skin, *Salmonella*, detection 151
- Chicken meat**
carcasses
cold storage, spoilage, pathogens 2909
keeping quality, Saudi Arabia 150
microbial contamination, Saudi Arabia 150
storage life, Saudi Arabia 150
Clostridium botulinum, spores, toxicity, control, sodium lactate, temperature 1073
contamination
Campylobacter coli, UK, Northern Ireland 995
Campylobacter jejuni, UK, Northern Ireland 995
Listeria monocytogenes
control
irradiation 3060
sous-vide treatment 3060
techniques, isolation 126
Escherichia coli, survival, irradiation, pH 2985
foodborne diseases, *Listeria* 2035
frozen meat, *Escherichia coli*, survival, isolation, growing media, comparisons 982
irradiation, *Salmonella typhimurium*, survival, water content, sodium chloride, sucrose, effects 3059
Listeria, hospitals, Greece 2065
Pseudomonas
characterization, Jamaica 992
isolation, Jamaica 992
- Chicken meat cont.**
Salmonella
detection, polymerase chain reaction 48
Thailand 152
skin
microbial contamination, pathogens, control, chemicals 2067
Salmonella typhimurium
adhesion, temperature, effects 1005
disinfection
chlorine 1007
ultrasonic treatment 1007
Yersinia enterocolitica, Morocco 2032
- Chickens**
carcasses
pathogens, Brazil 2064
Staphylococcus aureus
control
food additives 2070
pH 2070
temperature 2070
enterotoxins, production 2070
washing, waste water, *Salmonella*, detection, immunoassay 1845
- Chickpeas**, prepared foods, microbial flora, seasonal variation, Jordan 100
- Chile**
drinking water, microbial contamination, techniques 25
vegetables, irrigation, waste water, water-borne diseases 3371
- Chilling**, poultry, carcasses, *Salmonella*, control, pyrophosphates, antibacterial properties 2988
- China**
Ecuador, Mexico, shrimps, microbial contamination, retail marketing, wholesale marketing, comparisons 938
meat
microbial contamination
Clostridium perfringens 130
Listeria monocytogenes 130
Salmonella 130
Staphylococcus aureus 130
meat products
microbial contamination
Clostridium perfringens 130
Listeria monocytogenes 130
Salmonella 130
Staphylococcus aureus 130
sewage, biological treatment, application to land 3369
waste water, biological treatment, wetlands 3332
waste water treatment
application to land, urban areas 2364
ponds 1372
wood destroying fungi, *Phellinidium aciferum*, new species 2217
- Chiroptera**, excreta, churches, walls, paintings, biodegradation 3007
- Chitin**
biodegradation
Bacillus pabuli, chitinase, assays 823
bacteria, chitinase, assays 823
chitinase, biochemistry, *Bacillus circulans* 607
Chitinase, production, *Fusarium* 2758
Chlamydomonas reinhardtii, bioreactors, water purification, nitrite, removal 2630
- Chloramine**
cupric chloride
water purification
disinfection
Escherichia coli, inactivation, synergism 1746
MS-2 coliphage, inactivation, synergism 1746
- Chlorates**
biodegradation, pulp mill effluent, biological fixed-film systems, anaerobic treatment 1715
reduction, *Ideonella dechloratans*, new species 1787
- Chlorella**, heavy metals, uptake, tannery waste, anaerobic digestion 1586
- Chlorella emersonii**
organotin compounds, sorption 612
- Chlorella emersonii cont.**
tributyltin, sorption 612
- Chlorella fusca**, heavy metals, sorption, cell walls, cells 1587
- Chlorella pyrenoidosa**
aliphatic ketones, biodegradation 502
phthalates, esters, biodegradation, kinetics 3441
- Chlorella salina**, bioremediation, radioactive wastes, caesium, salinity 2262
- Chlorella vulgaris**
gold, uptake, analysis, x-ray photoelectron spectroscopy 2596
ponds, waste water, biological treatment 3342
waste water, ions, removal 1605
- Chlorinated alkenes**, methane production, inhibition 2457
- Chlorinated biphenyls**, biodegradation, bacteria, interactions 592
- Chlorinated ethenes**, biodegradation, groundwater, bacteria, reviews 3482
- Chlorinated hydrocarbons**
biodegradation
aerobes, cultures techniques, enrichment 2400
aerobic conditions, microorganisms, enzymes 2453
anaerobic conditions, aquifers, USA 2506
anaerobic treatment, bioreactors 3536
filters, sand, polluted soils, bioremediation, trials 3568
groundwater, aerobic conditions 2526
microbial flora, culture techniques 2462
Mycobacterium vaccae, propane monooxygenase 1518
dechlorination, microorganisms, anaerobic conditions 1486
soil, pollution, bioremediation, USA 2265
utilization, bacteria, bioassays, evaluation 1513
water pollution, bioremediation, bacteria 312
- Chlorinated hydrocarbons + aromatic compounds**, biodegradation, anaerobic conditions 1512
- Chlorinated organic compounds**, biodegradation, anaerobes, reviews 1801
- Chlorinated phenols**
biodegradation
microorganisms
carbonate, sediment 3596
nitrates, sediment 3596
sulfates, sediment 3596
- Chlorine**
activated sludge, inhibition 392
filamentous microorganisms, inhibition 392
Listeria monocytogenes, injury 2138
sewage effluent
bacteria, control 3170
viruses, control 3170
water, disinfection, viruses, removal 3065
- Chlorine dioxide**
antimicrobial activities, drinking water 3073
control, bacteria, contamination, cucumbers, water, cooling 2952
waste water, disinfection, pathogens, control 3163
- Chlorine + peracetic acid**
sewage effluent
disinfection
bacteria, control 3076
viruses, control 3076
- 4-Chloro-2-methylphenol**, biodegradation, bacteria, characterization 2542
- Chloroacetanilide herbicides**, biodegradation, soils, anaerobes 1556
- Chloroalkanes**, biodegradation, bacteria, strains, biological competition, biological filtration, bioreactors, aerobic conditions 3491
- Chloroallyl alcohols**, biodegradation, waste water treatment, bacteria, cultures 1437
- 2-Chloroaniline**, biodegradation, *Pseudomonas acidovorans* 784

- Chloroanilines**, biodegradation, soil, *Pseudomonas acidovorans* 499
- Chlorobenzene**, biodegradation, *Mycobacterium vaccae*, soil, metabolites, toxicity 574
- Chlorobenzenes**
biodegradation
bacteria, strains, biological competition, biological filtration, bioreactors, aerobic conditions 3491
soil, *Pseudomonas aeruginosa* 1505
- 3-Chlorobenzoate**
biodegradation
anaerobes, bioreactors 1501
Desulfomonile tiedjei 2412
- Chlorobenzoate**, biodegradation, *Pseudomonas*, anaerobic conditions, genetic engineering 3438
- Chlorobenzoates**
biodegradation
Alcaligenes eutrophus, chloromuconates, production 654
bacteria, interactions 592
- Chlorobenzoic acids**
biodegradation
aerobic conditions
Alcaligenes 2425
Pseudomonas 2425
- 4-Chlorobiphenyl**, biodegradation, *Alcaligenes eutrophus*, genetics 2427
- Chlorobium limicola**, sulfates, utilization, genetic transformation 1807
- Chlorobium tepidum**, nitrogen fixation 782
- 2-Chloroethylvinylether**, biodegradation, *Ancylobacter aquaticus*, techniques, isolation 3503
- Chlorofluorocarbons**, biodegradation, methanogens 2403
- Chloroform**
biodegradation
aerobes, cultures techniques, enrichment 2400
groundwater, bioremediation 498
Methylosinus trichosporium, *Pseudomonas putida*, oxygenases, activity 3446
- Chlorohydroxyquinol**, biodegradation, *Streptomyces rochei*, enzymes, characterization 1516
- Chloromuconates**, production, chlorobenzoates, biodegradation, *Alcaligenes eutrophus* 654
- 4-Chloronitrobenzene**, reduction, *Geobacter metallireducens*, magnetite 3558
- 4-Chlorophenol**, biodegradation, activated sludge, bioreactors, computers, control 1538
- Chlorophenol**
biodegradation
activated sludge, *Rhodococcus chlorophenolicus*, techniques, quantification, immunofluorescence microscopy 3576
Comamonas testosteroni 3589
- 2-Chlorophenol**, biodegradation, *Phanerochaete chrysosporium*, lignin peroxidase 583
- Chlorophenol**
biodegradation
Rhodotorula glutinis 3585
soil, straw, composting, effects 3533
- 4-Chlorophenol**, removal, pulp mill effluent, biological treatment, bioreactors, fluidized beds 1734
- Chlorophenol**, transformation, wines, cork, moulds 2999
- Chlorophenols**
biodegradation
anaerobic treatment, pH 597
Phanerochaete chrysosporium, models 2556
Pseudomonas aeruginosa 2396
removal
biological fixed-film systems, flow 2553
groundwater, bioreactors, fluidized beds, biofilms, aerobic treatment 2555
- Chlorophenols cont.**
removal cont.
water purification, biological fixed-film systems 2548
- Chlorophyta**, waste treatment, reviews 333
- Chocolate**, contamination, *Salmonella*, Mexico 2937
- Cholera**, vegetables, irrigation, waste water, Chile 3371
- Cholesterol**
oxidation
Pseudomonas
solvents
diphenylmethane 3601
xylene 3601
- Chopping boards**
plastics
microbial contamination
pathogens
disinfection 1053
food hygiene 837
wood
microbial contamination
pathogens
disinfection 1053
food hygiene 837
- Chromate**, reduction, *Pseudomonas*, bioreactors 639
- Chromates**
reduction, *Pseudomonas* 1602
removal, waste water, bioreactors, *Enterobacter cloacae* 1666
- Chromium**
chromate, reduction, *Agrobacterium radiobacter*, detoxification 3671
effects, activated sludge, microbial flora, growth 3846
electroplating waste water, starch, biodegradation, anaerobes, methane inhibitors 1221
inhibition, denitrifying microorganisms, growth 1588
reduction
bacteria 3828
cooling systems, water, blockage, bacteria 2132
Escherichia coli, mathematical models 3653
Pseudomonas fluorescens 1572
reduction+phenol degradation, *Pseudomonas putida*+*Escherichia coli* 3468
soil
pollution, bioremediation, reviews 648
reduction, sulfate reducing bacteria 3405
soil pollution, bioremediation, plants, uptake 2589
sorption, waste water, leaf mould 1571
uptake
Eichhornia crassipes, rivers, Zimbabwe 2587
groundwater, bacteria, metabolism 1579
waste water treatment, anaerobic digestion, inhibition 1381
water
pollution, bioremediation, reviews 648
reduction, sulfate reducing bacteria 3405
- Chrysosporium**, identification, culture media 2873
- Churches**, walls, paintings, biodeterioration, chiroptera, excreta 3007
- Cider**
Escherichia coli, survival, pH 915
microbial contamination, *Lactobacillus*, pH, Spain 1990
- Cigarettes**, mycotoxins, fungi, Egypt 912
- Ciliates**
biomass
biofilms, monitoring, activated sludge, rotating biological contactors 1841
population dynamics
activated sludge 1840
biofilms 1840
grazing, biomass, reduction, bioreactors 1307
- Ciliates cont.**
indicator species, activated sludge, effluents, quality 1842
- Cinnamon**, yeasts, control, almond paste 2940
- Citric acid**
Asparagus, pulps, *Clostridium sporogenes*, heat resistance 101
effects, *Clostridium sporogenes*, spores, heat resistance 3109
Listeria monocytogenes, inactivation, kinetics 1047
production, sugarcane bagasse, biodegradation, *Aspergillus niger* 467
- Citrobacter freundii**
immobilization, 1,3-propanediol, production, bioreactors, design 1415
infant foods, microbial contamination, detection 848
- Citrus fruits**, wastes, fermentation, *Xanthomonas campestris*, xanthan, production 477
- Cladosporium**
cherries, postharvest decay 107
medium chain fatty acids, biodegradation 2558
triacylglycerols, biodegradation 2558
- Clams**
contamination, polioviruses, Morocco, detection, comparisons 2786
processing, waste water, anaerobic treatment 3757
- Clay soils**, pentachlorophenol, biodegradation, *Arthrobacter* 596
- Climatic change**, environmental impact, books 834
- Clostridium**
acetates, utilization, methane production, genetic engineering 1420
arabinose, biodegradation, hydrogen, production 1478
biotechnology, applications, reviews 1866
cellobiose, biodegradation, xylanase, production 2736
cellulase, activity 2718
cellulosic wastes, fermentation, hydrogen, production 2478
growth
glucose, fermentation, hydrogen, production 3531
xylose, fermentation, hydrogen, production 3531
lactose, biodegradation, xylanase, production 2736
soft drinks, detection, polymerase chain reaction 819
sulfite reducing bacteria
drinking water, enumeration, comparison 2896
groundwater, enumeration, comparison 2896
sewage effluent, enumeration, comparison 2896
surface water, enumeration, comparison 2896
xylan, biodegradation, xylanase, production 2736
xylose, biodegradation, hydrogen, production 1478
- Clostridium acetobutylicum**
butanol, production, pH 777
lactic acid, utilization, lactate dehydrogenase 3426
potato waste, utilization, solvents, production 541
solvents
production
induced mutants 3848
pH 777
- Clostridium aldrichii**, anaerobic digesters, detection, ELISA 1818
- Clostridium algicarnis**, pigmeat, taxonomy 139
- Clostridium bifermentans**, explosives, biodegradation 1590
- Clostridium botulinum**
bacterial toxins
detection 53
fish, estimation, ELISA 1951

- Clostridium botulinum* cont.**
 bacterial toxins cont.
 prepared foods, vegetables, contamination 890
 control
 bacon, sodium nitrite 2978
 cured meats, sodium nitrite 2978
 turkey meat
 carboxylic acids 996
 contamination, organic salts 2991
 foodborne diseases, reviews, USA 2817
 foods
 contamination, detection 38
 detection
 bioassays 1853
 polymerase chain reaction 1853
 growth
 foods, vacuum packaging, pasteurization, chilling, heat resistance 2141
 mathematical models 1104
 pH, effects 1883
 temperature 3120
 human faeces
 detection
 bioassays 1853
 polymerase chain reaction 1853
 inhibition, beef, *Pedococcus pentosaceus*, temperature, effects 1060
 neurotoxins, production, detection, polymerase chain reaction 2922
 potatoes, sulfite, treatment, toxins, production, vacuum packaging 2008
 salads, potatoes, food poisoning, USA 2947
 salted fish, bacterial toxins, food poisoning, Egypt 2013
 shrimps, spoilage, vacuum packaging, temperature, USA, Georgia 950
 soil
 detection
 bioassays 1853
 polymerase chain reaction 1853
 spores
 foods
 heat treatment, survival 2907
 vacuum packaging, heat resistance 2209
 germination, inhibition, sodium lactate 1091
 heat resistance
 culture media, lysozyme 2877
 sodium lactate 1091
 honey, France 908
 inhibition, foods, caffeic acid 1032
 toxicity
 control
 beef, sodium lactate, temperature 1073
 chicken meat, sodium lactate, temperature 1073
 salmon, sodium lactate, temperature 1073
 survival
 foods, processed products, heat treatment, lysozyme, effects 3047
 meat products, toxins, production, vacuum packaging, storage, temperature 1922
 pasta, toxins, production, vacuum packaging, storage, temperature 1922
 techniques, identification, enzyme immunoassay 1900
 toxins
 genetics 1956
 nucleotide sequences 1957
 production
 inhibition, sodium lactate 1091
 shrimps, vacuum packaging, temperature, USA, Georgia 950
- Clostridium cellulolyticum***, cellulose, biodegradation 3537
- Clostridium hobsonii***, new species, cellulose, biodegradation, isolation, characterization 2711
- Clostridium hydroxybenzoicum***
 classification
 3,4-dihydroxybenzoate, decarboxylation 1811
- Clostridium hydroxybenzoicum* cont.**
 classification cont.
 4-hydroxybenzoate, decarboxylation 1811
- Clostridium papyrosolvens***, cellulose, biodegradation, cellulase, xylanases 2490
- Clostridium perfringens***
 beef
 detection, polymerase chain reaction 2041
 fish, contamination, temperature, tropics 963
 classification, bacterial toxins, types, genes, identification, polymerase chain reaction 2184
 food poisoning, identification, plasmid profiling 2772
 foods, identification, rapid methods 880
 growth, beef, temperature 134
 indicator species, marine environment, contamination, sewage disposal, dumping, USA 3360
 meat, microbial contamination, China 130
 meat products, microbial contamination, China 130
 microbial contamination, turkey meat, vacuum packaging, temperature, effects 998
 sewage sludge, disposal, oceans 3363
 spores, growth, beef, cooling 2092
- Clostridium sporogenes***
 control
 beef
 glycerol monolaurin 966
 sodium gluconate 966
 sodium lactate 966
 growth, tomato juice, contamination, models 94
 heat resistance, *Asparagus*, pulps, citric acid 101
 inhibition, *Lactobacillus acidophilus*, bacteriocins 1061
 spores
 heat resistance
 citric acid, effects 3109
 gluconolactone, effects 3109
 mushrooms, brine, heat resistance, determination 2948
 survival, bread, baking, storage 1982
 survival, canned products, processing, heat treatment, India 2002
- Clostridium thermoaceticum***
 cadmium, precipitation 3673
 coffee, beverages 219
- Clostridium thermocellum***
 β -amylase, starch, biodegradation 798
 cellobiose, utilization, cellulase, production 540
 cellulase, kinetics, hardwoods, pretreatment, biodegradation 1470
 cellulolytic microorganisms 1409
 cellulose
 biodegradation
 cellulase, production 2475
 cellulosomes, cellulase 1790
 utilization, ethanol production, metabolic inhibitors 1409
- Clostridium tyrobutyricum***
 food contamination, germination, kinetics, mathematical models 2191
 foods, cheeses, detection, DNA probes, polymerase chain reaction 253
- Cloves**, mackerels, spoilage, *Enterobacter aerogenes*, control 2953
- Coal**
 biodegradation
 Penicillium citrinum 2675
 Phanerochaete chrysosporium, Nigeria 519
 carbonation, waste water, biological treatment, activated sludge 2674
 carbonization, waste water treatment, activated sludge, ozone 749
 desulfurization
 Acidianus brierleyi 3799
 Thiobacillus ferrooxidans 470, 2673, 3799
 hydrogenation, bacteria 748
- Coal cont.**
 solubilization
 aromatic compounds, utilization, *Penicillium simplicissimum* 1755
 microorganisms, fluidized beds, mathematical models 3798
 substrates, drinking water, viruses, removal 236
 tars, chemical industry, wastes, biodegradation, microbial flora, composition 3769
- Coal fly ash**, sewage sludge, composting, microbial activities, Hong Kong 2302
- Coal mines**, polluted air, methane, removal, *Methylomonas fodinarum*, biological filtration 3797
- Coal tar**, aromatic hydrocarbons, biodegradation, contaminated land 2676
- Coastal areas**
 algal blooms, Spain 2219
 marine environment
 microbial contamination, United Arab Emirates 1138
 sewage effluent disposal, microbial contamination, mathematical models 1135
 sea water, sewage effluent disposal, viruses, indicator species 3138
- Coatings**, fungicides, meat production, moulds, control 2150
- Cobalt**
 separation
 pyrites
 oxidation
 Thiobacillus ferrooxidans 1754
 Thiobacillus thiooxidans 1754
 uptake
 Eichhornia crassipes, rivers, Zimbabwe 2587
 Saccharomyces cerevisiae 644
- Cocoa beans**
 fermentation
 bacteria
 population dynamics
 acetic acid, production 1984
 lactic acid, production 1984
- Coconut oil**, biodeterioration, fungi, control 2941
- Coconuts**, waste, carbohydrates, mannans, utilization, *Bacillus subtilis*, mannanase, production 2383
- Cod**, *Enterococcus faecium*, antibacterial properties 1066
- Coffee**
 beverages
 Bacillus stearothermophilus 219
 Clostridium thermoaceticum 219
 waste water, anaerobic treatment, inhibition, potassium, calcium 2345
- Coffee industry**
 waste water
 anaerobic digestion, preacidification 1672
 biological treatment, anaerobic conditions, Mexico 3760
 waste water treatment, biological filtration, anaerobic conditions 694
 wastes
 anaerobic digestion
 growth media, production 3756
 methane production 3756
- Coffee pulp**
 caffeine, biodegradation, fungi, isolation, characterization 2415
 feeds, production, *Penicillium verrucosum* 1402
- Coffee waste**, bioreactors, anaerobic treatment 2641
- Coir**
 biodegradation
 anaerobic digestion, biogas, production 3391
 composting, fungi 2468
 Pseudomonas 1468
- Coke**
 ovens, waste water, biological treatment, activated sludge, oxygen + biological filtration, Australia 3801

Coke cont.

- production
 - effluents, nitrification, biological treatment, ammonia, effects 1628
 - waste waters, phenolic compounds, removal, biological treatment, activated sludge, Poland 590
- wastes, aromatic hydrocarbons, biodegradation, microorganisms, surfactants, bioremediation 3800

Cold storage

- beef
 - microbial flora 137
 - spoilage, prediction, assays 2975
- chicken meat, carcasses, spoilage, pathogens 2909
- cooking, sausages, bacteria, survival 142
- eggs, *Salmonella enteritidis*, survival, washing, water, pH 1001
- fish, gram negative bacteria, inhibition, food preservatives, lactic acid bacteria 945
- foods, *Listeria*, cold injury, viability, detection 1109
- oysters, *Vibrio vulnificus*, survival, vacuum packaging 946
- Photobacterium histaminum*, viability, enzyme activity 1098
- Photobacterium phosphoreum*, viability, enzyme activity 1098
- sausages, *Campylobacter jejuni*, survival 984

Cold zones, ice, sewage, treatment, lagoons, performance, Canada 2341**Coliform bacteria**

- concentration, rivers, models 1077
- control
 - effluents
 - microbial contamination
 - filtration 3165
 - flocculation 3165
 - irradiation 3165
 - surface water
 - microbial contamination
 - filtration 3165
 - flocculation 3165
 - irradiation 3165
 - drinking water
 - chlorinated, detection, culture media 3192
 - detection, rapid methods, India 1915
 - faeces, wells, contamination, water quality 2228
 - fish, determination, rapid methods 2012
 - food industry, identification 2851
 - foods
 - detection 879
 - processed products, enumeration, o-nitrophenol 2850
 - growth, reservoirs, *Cupressus macrocarpa*, leaves, effects 211
 - inactivation, effluents, titanium dioxide, light 3089
 - lamb (meat), carcasses, microbial contamination, enumeration 2056
 - mangoes, processed products, microbial contamination, Australia 2949
 - milk products, techniques, detection, rapid methods 2094
 - removal
 - industrial wastes, activated sludge 389
 - sewage, activated sludge 389
 - seawater
 - enumeration, culture media 2845
 - identification, filters, membranes, errors 2844
 - streptococcaceae, sewerage, monitoring 3175
 - surface water, detection, spectrofluorometer 3137
 - techniques
 - detection, culture media 1857
 - incubation, estimation 1849
 - walnuts, contamination, gamma radiation, control 2938
 - water
 - detection, polymerase chain reaction 856

Coliform bacteria cont.

- water cont.
 - microbial contamination, *Larus delawarensis*, public health 3227
 - water quality, detection, methodology, assessment 857
- Coliform count**, water purification, techniques, water quality, waterborne diseases, Canada 2891

Coliphages

- meat production, waste water, biological treatment, lagoons 1145
- sewage, lagoons, biological treatment 1145
- water, detection, Brazil 1119

Colleges, USA, food wastes, domestic gardens, wastes, composting 362**Colloids**

- biodegradation
 - biological filtration, mathematical models 1395
 - rotating biological contactors, mathematical models 1395

Colombia, sewage, anaerobic treatment, bioreactors 2285**Comamonas acidovorans**, immobilization, glass, beads, quinoline, biodegradation, bioreactors 3616**Comamonas testosteroni**

- biphenyl, biodegradation, genetics 790
- chlorophenol, biodegradation 3589
- methylphenol, biodegradation 3589
- 4-toluene sulfonate, biodegradation 520

Compost, production, sewage, domestic gardens, plant residues, correctional institutions, USA 360**Composting**

- aeration, salmon, carcasses, fish farms 2309
- air pollutants, monitoring 3158
- animal wastes 1249
 - USA 1235, 1251
- Asterias amurensis*, wastes + wood residues 371
- bacteria, survival, temperature 3171
- bioreactors, Canada 376
- buildings, air pollution, microbial contamination 1257
- businesses, USA, Ohio 3291
- cattle slurry, UK, reviews 1256
- coir, biodegradation, fungi 2468
- 2,4-D, biodegradation, refuse 3630
- design
 - foods, Australia 1246
 - slaughterhouse waste, Australia 1246
 - USA 1248
- diesel oil, biodegradation, polluted soils 321
- domestic gardens
 - kitchen waste, Germany 367
 - plant residues
 - economics, cost analysis 2293
 - USA 3283
 - wastes
 - heat recovery 1255
 - kinetics 353
- economic analysis, USA, Ohio 3292
- ecosystems, toxicology, linear alkylbenzene sulfonate, biodegradation, sewage, treatment, Spain 3639
- efficiency, sewage sludge, USA 2303
- estimation, domestic gardens, wastes, USA 1481
- EU regulations 3812
- evaluation, food wastes, agricultural wastes, USA 361
- explosives, sediment, bioremediation, USA 2617
- fast food restaurants, waste paper, USA 3297
- fish, carcasses 372
- food processing, wastes, Canada 3288
- food service, organic wastes, USA 3299
- food waste, waste paper, Canada 370
- food wastes
 - Canada 359
 - domestic gardens, wastes, colleges, USA 362
 - economics, USA 366
 - Korea 369

Composting cont.

- food wastes cont.
 - Mexico 2299
 - USA 359, 1234, 1251
- foods
 - wastes
 - economic analysis, USA 3278
 - USA 3290
 - grass clippings, USA 3284
 - health hazards
 - Aspergillus fumigatus*, mycotoxins 2308
 - endotoxins 2308
 - lignocellulosic wastes
 - atrazine, biodegradation 3633
 - biodegradation 378
 - management 358
 - manures
 - biogas, production 750
 - USA 1235
 - oil palms, residues + manures 3281
 - organic wastes
 - Austria 3293
 - Belgium 2300
 - pathogens, survival, temperature 3171
 - pig manure, microbial activities 3809
 - plant residues
 - economics, USA 366
 - Germany 3294
 - USA 1247, 1250
 - plastic tunnels
 - agricultural wastes, odour abatement 1258
 - manures, odour abatement 1258
 - polyethylene film, starch, biodegradation, Italy 3279
 - poultry, carcass disposal, viruses, survival 1771
 - poultry manure
 - amendments, New Zealand 1770
 - ammonia, absorption, bark, soil, phosphate rock, solubilization 755
 - litter 2301
 - straw, aeration, temperature 1254
 - refuse
 - Australia 3282
 - costs, reviews 352
 - Germany 3294
 - Nigeria 355
 - organic matter, biodegradation 356
 - sewage sludge
 - anaerobic treatment, aerobic treatment, Austria 764
 - Italy 363
 - USA 365, 2305
 - wastes, Spain 2310
 - sawdust, plant growth regulators, biodegradation, microorganisms 1239
 - sewage, application to land, reviews 351
 - sewage sludge
 - coal fly ash, microbial activities, Hong Kong 2302
 - land reclamation, UK 368
 - odour abatement, USA 377
 - reviews, USA 1244
 - USA 374-375, 1247, 2292, 2304
 - wood chips, organic matter, biodegradation, moisture 354
 - sewage sludge disposal, Germany, reviews 2691
 - sewage sludge + refuse, USA 373
 - sludges, reviews 1170
 - solid wastes, USA 1241
 - USA 3289
 - waste paper, USA 1251
 - wastes
 - application to land, reviews 351
 - microbial flora, characterization 2297
 - microorganisms, temperature, water content, effects 3280
 - odours, control 2306
 - reviews 2790
 - UK 2291
 - USA 3287
 - Switzerland 3285
 - USA 3286, 3298
 - books 2807

Composting cont.

- wheat straw, animal manures, mushroom compost, production, mathematical models 1242
- wood products, fibres, adhesion, urea-formaldehyde 2298
- wood residues, economics, USA 366

Composting + aerobic digestion, sewage, refuse, biogas, production, fuel cells 438**Composting + anaerobic digestion**

- agricultural wastes, methane production 1758
- plant residues, methane production 1758

Composts

- Aspergillus fumigatus*, health hazards 3173
- Bacillus subtilis*, enzymes, characterization 2707
- bacteria, enumeration, identification, Canada 2296
- biodegradation, *Thermoactinomyces*, isolation, culture media 1825
- biological filtration, hydrogen sulfide, removal, waste gases, industry 1667
- effects, horticultural crops, nutrient content, Germany 357
- food wastes, paper, wastes 379
- hot water extracts, chemistry, Finland 3302
- isolation
 - Bacillus*, cellulase, production 1784
 - Streptomyces*, cellulase, production 1784
- marketing, sewage sludge, USA 1236
- nappies, microbial contamination 1240
- pollution, petroleum hydrocarbons, soil, bioremediation 2270
- production, marketing, sewage sludge, plant residues, USA 1253
- sewage sludge, pathogens, growth, USA 3172
- stability
 - bark, microorganisms, indicators 2295
 - sawdust, microorganisms, indicators 2295
- standards, development, USA 1245
- sugarcane bagasse, biodegradation, hydrocarbons, production 1477
- utilization, reviews, Australia 3295
- wastes, odours, control, scrubbing 2307

Computer simulation

- activated sludge, control, nitrogen, measurement, mathematical models 1285

- nitrification, denitrification, control, waste water treatment, Germany 339

- nitrogen, removal, sewage, biological treatment, upgrading, Netherlands 1776

- waste water treatment, control 1660

Concrete

- corrosion, biological filtration, sewerage, Netherlands 3017
- microbial corrosion
 - sewerage, Japan 3012
 - waste water treatment 3014

Condensates

- abattoirs, structures, surfaces, microbial contamination 3026
- meat production, factories, structures, surfaces, microbial contamination 3026

Conferences

- 15th World Congress of Soil Science 3215-3217, 3493-3494, 3672
- All India seminar on pollution control in sugar industry 713
- Biofilm reactors 1173-1177, 1182-1191, 1210-1213, 1224-1225, 1266-1268, 1273, 1291, 1392-1395, 1493-1494, 1507-1508, 1597, 1626, 1631-1634, 1664, 1696, 1743-1745, 1805
- Biology and taxonomy of green algae 333
- drinking water, microbial contamination, disinfection 827
- Environmental quality and ecosystem stability 2843, 2884, 2904-2905, 2969, 3032, 3198, 3219, 3268, 3277,

Conferences cont.

- Environmental quality and ecosystem stability cont.
 - 3340-3342, 3367, 3372-3373, 3389, 3506, 3709, 3770-3771, 3869
- Forest industry wastewaters 1501, 1699-1700
- Forest Industry wastewaters 1702
- Forest industry wastewaters 1703, 1705-1706, 1708-1714, 1716-1721
- Forest industry wastewaters 1704
- Forestry industry wastewaters 1715
- Forum for Applied Biotechnology 3257, 3267, 3301, 3490-3492, 3605, 3708
- Health-related water microbiology 2832-2836, 2860-2869, 2891-2898, 3067-3076, 3135-3136, 3138-3139, 3146-3150, 3153-3155, 3159, 3161, 3187-3193, 3255, 3371, 3903-3905
- Hydrochemistry 1993 1160, 1200, 1532
- Immunopathogenic aspects of foodborne microbial disease 4-5
- In-situ and on-site bioreclamation 832
- Integrated Research for Soil and Sediment Protection and Remediation (EUROSOL) 3225
- Integrated water resources management 3105, 3435
- International conference on agricultural engineering 1258, 1758
- International symposium on compost recycling of wastes. 2790
- Interurbia '92 1135, 1201
- Management of postharvest disease resistance in horticultural crops 105, 828
- marine coastal eutrophication 2791
- Microorganisms in activated sludge and biofilm processes 1154-1156, 1215-1217, 1280-1282, 1300-1301, 1306-1326, 1537-1538, 1613-1614, 1650-1655, 1735-1736, 1816-1817, 1819-1822, 1841, 1864
- Pretreatment of industrial wastewaters 1596, 1628-1630, 1662-1663, 1672, 1680-1681, 1690-1691
- Pretreatment of Industrial wastewaters 1692
- Pretreatment of industrial wastewaters 1723, 1862
- Seventh International Symposium on Individual and Small Community Sewage Systems 2789
- Sewage into 2000 -developments and upgrading in sewerage and waste-water treatment 3017
- Sewage into 2000 -developments and upgrading in sewerage and waste-water treatment 3326
- Sewage into 2000 -developments and upgrading in sewerage and waste-water treatment 3305, 3327-3328, 3361, 3699-3704, 3725-3727, 3749-3750, 3910
- The sewer as a physical, chemical and biological reactor 3018, 3057, 3174, 3256
- Upgrading of wastewater treatment plants 1142, 1192-1194, 1227, 1274-1276, 1293-1295, 1370, 1396, 1606-1609, 1636-1640, 1724, 1776-1779, 1863, 2237, 2271
- Water and environmental management in Europe and North America 225, 280, 328-329, 342, 363-364, 381-382, 427
- Water and environmental management in Europe and North America 428
- Water and environmental management in Europe and North America 449, 452-453, 675, 730, 835
- Water quality international 1992 498
- Water quality international '94 338-340, 345, 410-411, 421, 448, 671, 685
- Water Quality International '94 1126, 1128, 1292, 1440, 1559, 1583, 1665-1666, 1679, 1682-1684, 1693, 1725-1729, 1749, 1782, 2680, 3258, 3729-3741, 3753-3754, 3909
- Wetland systems in water pollution control 1122, 1330-1351, 1353-1365, 1622-1623, 1861

Coniophora puteana, enzymes, purification 536-537**Conservation**, paintings, biodeterioration, India 194**Contact lenses**, disinfectants, solutions, chlorhexidine gluconate, *Serratia marcescens*, growth 3023**Contaminants**, desorption, groundwater, bioremediation, *in situ*, mathematical models 315**Contaminated land**

- aromatic hydrocarbons, biodegradation, coal tar 2676
- bioremediation
 - books 284
 - reviews 284

Contaminated soils, polychlorinated biphenyls, biodegradation, microorganisms, determination, gene probes 3577**Control**, ultraviolet radiation, water systems, *Legionella* 1029**Controlled atmosphere storage**

- Ictalurus punctatus*, filets, microbial contamination 866
- mackerels, packaging, pathogens, control 114

Controlled atmospheres, oxygen, *Listeria monocytogenes*, survival, models 3104**Cook-chill system**, food, microbial contamination, pathogens, Malaysia 1945**Cooking**, cold storage, sausages, bacteria, survival 142**Cooking methods**, foods, microbial contamination, Japan 1919**Cooling systems**

- isothiazolone, treatment, antibiotic resistance, *Pseudomonas aeruginosa*, culture media 1028
- water, blockage, chromium, reduction, bacteria 2132

Cooling towers

- Legionella*, control, biocides, Australia 2158
- Legionella pneumophila*, Singapore 840

Copper

- adsorption, *Bacillus subtilis*, cell walls, binding, efficiency 1158
- bacteria, resistance, water distribution, pipes, corrosion, genes 3038
- electroplating waste water, starch, biodegradation, anaerobes, methane inhibitors 1221
- extraction
 - biomass, decontamination, nitrilotriacetic acid 3657
 - Pseudomonas fluorescens*, decontamination, nitrilotriacetic acid 3657
- mine tailings, bacterial leaching, *Thiobacillus ferrooxidans*, Canada, lipopolysaccharides 2672
- mining
 - bacterial leaching
 - Flavobacterium*, India 2671
 - Pseudomonas*, India 2671
- removal
 - acid mine drainage, bioreactors 745
 - Bacillus subtilis* 3660

rocks

- bacterial leaching
 - Thiobacillus ferrooxidans* 747
 - Thiobacillus thiooxidans* 747

- soil pollution, bioremediation, plants, uptake 2589

sorption

- heavy metals, *Chlorella fusca*, cell walls, cells 1587
- Pseudomonas aeruginosa* 3654
- Thiothrix* 2585

uptake

- Ascomyllum nodosum*, alginates, leaching, effects 1574
- Eichhornia crassipes*, rivers, Zimbabwe 2587
- Saccharomyces cerevisiae* 644
- cations, release 807
- Vallisneria spiralis*, uptake 2595
- viruses, inactivation, surgical instruments 3092

Copper + silver, water, disinfection, viruses, removal 3065

- Copper sulfate + calcium hydroxide**, algal blooms, treatment, hepatotoxins, release, *Microcystis aeruginosa* 3149
- Coprinus cinereus**, rice straw, biodegradation 1464
- Coprinus macrorrhizus**, waste water, phenols, biodegradation, peroxidases 584
- Coriopsis occidentalis**, wood, biodeterioration 1013
- Coriopsis polyspora**
cultures, polychlorinated biphenyls, biodegradation 602
lignin, biodegradation, enzymes 553
- Coriolus versicolor**
lignin
biodegradation, enzymes 553
discoloration, sulfate pulping, waste water, gluconolactone, effects 2658
soybeans, wastes, biomass production 2373
wood, biodegradation, oxidoreductases, production 3525
- Cork**, contamination, resistance, fungi 3000
- Correctional institutions**, USA, compost, production, sewage, domestic gardens, plant residues 360
- Corynebacterium**
petroleum, microbial contamination 3008
propanols, biodegradation, propanediols, production 3499
- Corynebacterium glutamicum**, growth, lactate, utilization 2731
- Cosmetics**
contamination, pathogens 3010
preservatives, testing 1020
- Costa Rica**
cyanobacteria, toxicity, water purification, works 1914
fruit, microbial contamination, hospital food service, food hygiene, assessment 2828
ice cream, *Listeria monocytogenes* 2097
salads, microbial contamination, hospital food service, food hygiene, assessment 2828
soft cheese, *Listeria monocytogenes* 2097
water supply, microbial flora, characterization 739
- Costs**, refuse, composting, reviews 352
- Cote d'Ivoire**, maize, insect pests, control 77
- Côte d'Ivoire**
sewage, biological treatment, fish ponds 1398
waste water, biological treatment, fish ponds 1398
- Cottage cheese**
Listeria monocytogenes, survival, food preservatives, sorbates 2095
microbial flora, modified atmosphere storage 182
- Cotton**
contamination, aflatoxins, *Aspergillus flavus*, Slovakia 1011
straw
biodegradation
lime, treatment 1461
sodium hydroxide, treatment 1461
- Cotton waste**
anaerobic treatment, methane production, India 2665
utilization, *Pleurotus*, efficiency 2497
- Coumaric acids**, alcoholic beverages, spoilage, yeasts, control 2151
- Crab meat**, bacterial count, evaluation 951
- Crab waste**, silage making, molasses, silage additives 758
- Crabs**, boiling, *Vibrio cholerae*, survival, chitin, effects 3061
- crassipes**, rom, n
nutrients, removal, sewage effluent, *Eichhornia crassipes*, Spain 1612
- Crayfish**
Listeria monocytogenes
control
glycerol monolaurate + organic acids 1035
lactic acid, packaging 2026
monolaurin, packaging 2026
- Cream**, Enterobacteriaceae, control, disinfectants, Italy 2079
- Creosote**
biodegradation
microorganisms, polluted soils 322
soil, *Phanerochaete sordida* 2534
compounds, interactions, groundwater, biodegradation, aerobic conditions 3403
fuel oils, wood, biodeterioration, termites, control 188
polluted water, nitrification, inhibition 3145
- P-cresol**
biodegradation
Alcaligenes faecalis 2540
Candida tropicalis 2540
Phanerochaete chrysosporium 2541
- Cresols**
biodegradation, bacteria, anaerobic conditions 3578
inhibition, benzoates, biodegradation, bioreactors, granules 2552
- Criolus versicolor**, lignin, biodegradation 3517
- Croatia**
foodborne diseases, economics 842
processed cheese
keeping quality
microbial flora
acidity 179
pH 179
- Crocodiles**, farming, waste water, salmonellae, techniques, enumeration, Zimbabwe 1815
- Crop residues**, fermentation, biogas, production, anaerobic digesters, operation, kinetics 3574
- Crops**
contamination, irrigation, waste water, pathogens, Israel 3368
postharvest decay, biological control 105
- Crotalaria juncea**
retting
Aspergillus niger 1462
Bacillus subtilis 1462
- Crumpets**, *Bacillus cereus*, toxins, production, control, nisin 2155
- Crustacea**, antibiotics, resistance 3056
- Cryptococcus laurentii**, vinasse, utilization, biomass production 715
- Cryptosporidium**
oocysts, drinking water, recovery, filtration 1852
toxins, water, immunodetection, reviews 3189
water supply, microbial contamination, Canada 2841
- Cryptosporidium parvum**
inactivation, ozone 2824
oocysts
survival, sewage sludge, treatment 2239
water, inactivation, ultraviolet radiation 3077
preservatives, survival 2825
removal, water purification, treatment, processes 3784
- Cuba**, biogas, production, pig slurry, anaerobic digestion, zeolites, additives 1422
- Cucumbers**, water, cooling, bacteria, contamination, chlorine dioxide, control 2952
- Cucumis sativa**, laccase, characterization, calorimetry 1832
- Culinary herbs**, microbial flora, Austria 1987
- Culture media**
acetic acid, *Listeria monocytogenes*, enzyme activity 1099
Bacillus stearothermophilus
spores
heat stress
calcium 1111
magnesium 1111
comparisons, estuaries, faecal coliforms, recovery 18
hydrochloric acid, *Listeria monocytogenes*, enzyme activity 1099
Listeria monocytogenes, growth 3124
- Culture media cont.**
lysozyme, *Clostridium botulinum*, spores, heat resistance 2877
optimization, biosurfactants, production, *Bacillus licheniformis* 1551
water
Escherichia coli, enumeration 21
faecal coliforms, enumeration 21
water content, *Saccharomyces cerevisiae*, control, sorbic acid 3051
- Cultures**, bacteria, chloroallyl alcohols, biodegradation, waste water treatment 1437
- Cumene**, biodegradation, *Rhodococcus rhodochrous* 1428
- Cunninghamella elegans**
isoquinoline, biodegradation 1484
quinoline, biodegradation 1484
- Cunninghamella elegans**, 3-nitrofluoranthene, biodegradation 1495
- Cupressus macrocarpa**, leaves, effects, reservoirs, coliform bacteria, growth 211
- Cured meats**, *Clostridium botulinum*, control, sodium nitrite 2978
- Curvularia senegalensis**, soil, polyurethanes, biodegradation, enzymes, characterization 509
- Cyanide**
biodegradation, reviews 3678
degradation, ammonia, utilization, *Rhodotorula rubra* 2631
removal, almonds, seeds, waste water, biological treatment, fluidized beds, aerobic conditions 3687
- Cyanides**
biodegradation
polluted soils, microbial flora, bioremediation 1552
Pseudomonas putida 1601
sewage, treatment, activated sludge 668
- Cyanobacteria**
biofilms, biofloculants, production, metals, bioremediation 3224
biomass, production, bioreactors, India 793
blooms, Baltic Sea 1133
excretion, nitrites, glucose, utilization 3867
fuel oils, biodegradation, polluted soils, bioremediation, Arab countries 2502
growth, chemical composition, piggery effluent 2368
hepatotoxins, biodegradation, water 2923
metals, removal, wetlands, reviews 3652
microcystins, production, fresh water, Canada, bioassays 3095
monuments, biodeterioration, ecology 3016
microcystin, drinking water, treatment 2901
oil refinery wastes, biodegradation, polluted soils, bioremediation, Arab countries 2502
parathion-methyl, biodegradation, soil 1553
petroleum hydrocarbons, biodegradation, marine environment, coastal areas, Kuwait 1483
toxicity
detection, bioassays 3134
water purification, works, Costa Rica 1914
toxins
drinking water 2899
production, decomposition, chemicals, chemical analysis 891
zirconium, uptake 649
- Cyanuric acid**, biodegradation, *Pseudomonas* 2432
- Cyathus**, rice straw, biodegradation 2477
- Cyathus bulleri**, polyvinylamine sulfonate anthrapyridone, decolorization 1593
- Cycloalkenones**, biodegradation, *Pseudomonas putida* 2419
- Cypermethrin**, residues, biodegradation, biological activity in soil, Brazil 2570
- Cyperus esculentus**, stored products, bacterial count 934

- Cysteine + potassium sorbate, *Listeria monocytogenes*, toxins, production** 1954
- Czech Republic**
- molasses distillers' solubles, biodegradation, anaerobic treatment, bioreactors 1679
 - polluted soils, bacteria, biodegradation, plasmids, transfer 3833
 - reservoirs, eutrophication 1128
- 2,4-D**
- biodegradation
 - activated sludge, consortia 3632
 - Alcaligenes eutrophus*, enzymes 622
 - bacteria, phosphorus, rivers, Egypt 1563
 - Nocardioideus simplex* 1561, 3618
 - plasmids
 - Alcaligenes paradoxus* 780
 - Pseudomonas pickettii* 780
 - Pseudomonas cepacia*, enzymes, purification 618
 - refuse, composting 3630
 - soil 3623, 3626
 - Pseudomonas cepacia* 1557
 - soil microorganisms, genetics 3621
 - waste water treatment 1559
 - residues, biodegradation, soil, *Azotobacter chroococcum* 631
- Dairy effluent**
- biological treatment 702, 704
 - anaerobic digesters, hybrids, performance 2646
 - wetlands, constructed, *Schoenoplectus validus*, New Zealand 1340
- denitrification, wetlands, New Zealand** 1367
- methane production, anaerobic digestion, USA 1387
 - utilization
 - Anacystis*, hydrogen, production 1407
 - Rhodospseudomonas*, hydrogen, production 1407
- Dairy factories**
- contamination, *Listeria* 125
 - Listeria*, detection 2206
- Dairy industry, wastes, biological treatment, reviews** 708
- Dairy waste water, biological treatment, wetlands, artificial, New Zealand** 3763-3764
- Dairy wastes**
- anaerobic digestion, efficiency 3765
 - biodegradation, *Kluyveromyces fragilis*, bioreactors 709
 - biological treatment 702
 - Norway 2643
- Daphnia**
- sewage, biological treatment, ponds, mathematical models 3333
 - toxicity, water pollution, reservoirs, *Microcystis*, bacterial toxins 1804
- Dates**
- wastes, biodegradation, *Endomycopsis fibuligera*, enzymes 3759
 - wastes + rice straw, *Pleurotus ostreatus*, growth 2367
- DBCP, biodegradation, *Pseudomonas putida*, cytochrome P450** 1489
- DDT**
- biodegradation, soil, bacteria, growth, humic acids, effects 628
 - removal, sewage effluent, artificial wetlands, *Phragmites australis* 3335
- Dechlorosporium hafniense, aromatic hydrocarbons, chlorine, biodegradation, bioreactors, anaerobic treatment** 2530
- Decision analysis, microcomputers, waste water treatment, Japan** 448
- Dehalospirillum multivorans**
- characterization, tetrachloroethane, biodegradation 2745
 - tetrachloroethylene, biodegradation, enzymes, properties 2454
- Demethoxybenzyl alcohol, biodegradation, *Penicillium citrinum*** 2675
- Dendronephthya, antifouling agents, production, biofouling, *Mytilus edulis*, control** 221
- Denitrification**
- activated sludge 2632
- Denitrification cont.**
- activated sludge cont.
 - activated sludge, control, electrodes 2256
 - aerobic conditions, *Thiosphaera pantotropha* 3722
 - dissolved oxygen, concentration, effects 3733
 - nitrous oxide, production, mathematical models 3736
 - performance, monitoring, fluorescence 684
 - trimethylamine, effects 3314
 - upgrading, Sweden 1777
 - volatile fatty acids, effects 3314
 - anaerobic conditions, substrates, uptake 1651
 - bacteria
 - biofilms, biological fixed-film systems, operation 3861
 - enzymes, entrapment, glass 2722
 - reviews 1648
 - biofilms
 - biological treatment, fluidized beds, mathematical models 1633
 - sludges
 - biological treatment, substrates, utilization 3732
 - hydrolysis, utilization, substrates 1619
 - biological filtration 1621
 - aeration, kinetics 1206
 - carbon, utilization 1620
 - biological fixed-film systems, *Pseudomonas aeruginosa* 677
 - biological treatment
 - effluents, recirculation, ponds + lagoons, aeration 3716
 - filters, submerged 1264
 - dairy effluent, wetlands, New Zealand 1367
 - drinking water
 - bacteria
 - identification, isolation 2848
 - immobilization, poly(vinyl alcohol), gels 3710
 - biofilms, adhesion, electrodes, mathematical models 676
 - biological fixed-film systems 3789
 - bioreactors
 - sludges
 - granular, formation 1742
 - granules 3790
 - mathematical models 680
 - dynamics, bioreactors, mathematical models 2623
 - enhancement
 - activated sludge 3734
 - biological filtration, oxygen, limitation, covers 3741
 - filters
 - biological treatment
 - upgrading
 - activated sludge 3740
 - biological fixed-film systems 3740
 - fish, feeds, biodegradation, anaerobic digestion, fluidized beds, volatile fatty acids 3714
 - groundwater
 - biological treatment, fluidized beds 1744
 - bioreactors, biofilms, electrodes, performance 1745
 - fluidized beds, kinetics 2668
 - incomplete, activated sludge, bulking, effects 1323
 - inhibition, oxygen, *Flexibacter canadensis* 679
 - kinetics
 - Bacillus licheniformis*
 - ammonium 2622
 - oxygen 2622
 - meat production, waste water, wetlands, New Zealand 1367
 - microorganisms, immobilization, poly(vinyl alcohol), bioreactors 1168
 - nitrification
 - activated sludge, aerobic treatment, anaerobic treatment, USA 1653
- Denitrification cont.**
- nitrification cont.
 - industrial wastes, waste water, activated sludge, mathematical models 1635
 - sewage, biological filtration, kinetics 1634
 - Nitrosomonas*, waste water treatment 2633
 - phosphorus, removal, activated sludge, acetate, hydrolysate, substrates 3711
 - pig manure, activated sludge+molasses 1764
 - products, activated sludge 3712
 - Rhodobacter sphaeroides*, isolation, lagoons, sludges, characterization 1823
 - sewage
 - activated sludge, dynamic models, temperature 685
 - biological filtration, upgrading, Germany 1639
 - biological treatment
 - Belgium 1649
 - respiration rate, determination 1613
 - reviews 1643
 - reed beds, Germany 1623
 - sewage sludge, dewatering, effluent, activated sludge, Germany 2628
 - toluene, biodegradation, anaerobes 3573
 - waste water
 - biological filtration, filters, design 1645
 - biological treatment, reviews 1646
 - denitrifying bacteria, immobilization, gels + electrodes 3738
 - enzyme activity, mathematical models 3735
 - Paracoccus denitrificans*, bioreactors, cells, immobilization, determination 1627
 - Pseudomonas*, bioreactors, cells, immobilization, determination 1627
 - UK, operation 675
 - USA, operation 675
 - waste water treatment
 - heterotrophic microorganisms, nitrite, accumulation 2625
 - Pseudomonas denitrificans*, bioreactors, models 2624
 - wetlands, constructed 1332
- Denitrifying bacteria**
- immobilization, gels + electrodes, denitrification, waste water 3738
 - toluene, biodegradation, kinetics 2521
 - toluene+xylene, biodegradation 2520
- Denitrifying microorganisms, growth, chromium, inhibition** 1588
- Denmark**
- animal wastes, biogas, production, pathogens, removal, indicator species, bacteria 1760
 - Listeria monocytogenes*, epidemiology, electrophoresis 2842
 - nitrification
 - characterization, activated sludge, waste water treatment, design, upgrading 678
 - inhibition, sewage, biological treatment, toxic substances 1629
 - nitrogen
 - removal
 - activated sludge, control 2620
 - sewage, kinetics 1641
 - nutrients
 - removal
 - activated sludge, settlement 1309
 - sewage sludge, hydrolysis, anaerobic digestion 1606-1607
 - sludges, hydrolysis, anaerobic digestion 1606-1607
 - phosphorus, removal, activated sludge, control 2620
 - sludges, biological treatment, anaerobic treatment, thermophilic microorganisms 1774
- Dentrification, waste water treatment, microorganisms, immobilization, mathematical models, reviews** 3715

- Deoxynivalenol** (see Vomitoxin)
- Desulfacinum infernum**, new species, sulfates, reduction, North Sea 2713
- Desulfobacter**, oilfield water injection systems, corrosion, detection, DNA probes 1689
- Desulfobacterium ceticum**
biochemical pathways
acetone, biodegradation 2418
butyrate, biodegradation 3485
- Desulfobacula toluolica**
toluene
biodegradation
biochemistry 2508
taxonomy 2508
- Desulfobulbus propionicus**
pyruvic acid, fermentation, acetates, production 652
sulfides, oxidation 3852
- Desulfomonile tiedjei**
aromatic hydrocarbons, chlorine, biodegradation, bioreactors, anaerobic treatment 2530
3-chlorobenzoate, biodegradation 2412
tetrachloroethene, biodegradation 2412
- Desulforhabdus amnigenus**, new species, isolation, paper, processing, waste water treatment, sludges 3853
- Desulfotomaculum**
heavy metals, sulfides, precipitation 3656
resistance, nickel 3656
- Desulfotomaculum thermobenzoicum**, pyruvic acid, fermentation, acetates, production 652
- Desulfovibrio**, trinitrotoluene, biodegradation 567
- Desulfovibrio desulfuricans**
carbon, biomass, estimation, assays, fluorescence microscopy 820
carbon dioxide + hydrogen, alkanes, production 3825
coal, hydrogenation 748
diphenyl methane, hydrogenation 748
fumarate, hydrogenation 748
heavy metals, immobilization, refuse, burning, ash, landfills 3374
inhibition
kinetics
sulfides
production
sewage 666
waste water 666
mercury, methylation, cobalamin, mediation 3674
methylmercury, transformation, anaerobic conditions 3664
porous media, sulfates, reduction, kinetics 3680
- Desulfovibrio desulfuricans + Chlorobium thiosulfatophilum**, sulfates, gypsum, decomposition, bacterial leaching 2612
- Desulfovibrio vulgaris**, pyruvic acid, fermentation, acetates, production 652
- Desulfurella acetivorans**, taxonomy, DNA sequencing 3835
- Desulfurization**
coal, *Thiobacillus ferrooxidans* 470
Rhodococcus, genes, characterization 3829
- Desulfurococcus**, sulfur, utilization 3682
- Desulfurolobus ambivalens**, sulfur, metabolism, enzymes 1814
- Detection**, *Yersinia enterocolitica*, detection, RNA probes 3897
- Deuteromycotina**, pentachlorophenol, biodegradation 3582
- Developing countries**, plant residues, anaerobic treatment, energy, production 3394
- Dexiospira**, boats, fishing, biofouling, Taiwan 3040
- Diapers**, contamination, viruses, survival, indicator species 3135
- Diatom**
blooms
estuaries, Canada 2229
rivers, Canada 2229
- Diatoms**, sea water, pollution, mucilages, Italy 131
- Dibenzo-p-dioxin**, biodegradation, *Sphingomonas*, identification, ribosomal RNA 3425
- Dibenzofuran**, biodegradation, *Staphylococcus auricularis* 3501
- Dibenzothiophene**
biodegradation
Pseudomonas putida 3420
sulfate reducing bacteria 2651
desulfurization, bacteria 3407
- Dibutyl phthalate**
biodegradation
biomass, sorption, effects 3465
Pseudomonas fluorescens 2405
- Dichloroacetic acid**
biodegradation, *Xanthobacter autotrophicus*, immobilization 3417
soil, biodegradation, *Xanthobacter autotrophicus* 3418
- 3,4-Dichloroaniline**
biodegradation
polymers, production, *Phanerochaete chrysosporium*, identification, hplc 3634
waste water treatment, bioreactors 337
- 1,4-Dichlorobenzene**, biodegradation, activated sludge 579
- 1,2-Dichloroethane**
biodegradation
aerobes, cultures techniques, enrichment 2400
aerobic treatment, bioreactors 1435
bioreactors, granular activated carbon, regeneration, bacteria 1272
- 1,2-Dichloroethene**, waste water, biodegradation, bioreactors, membranes, mathematical models 3411
- 1,2-Dichloroethylene**
biodegradation, microbial flora, sewage sludge, anaerobic treatment 2431
groundwater, bioremediation 2431
- 4,5-Dichloroguaiacol**, removal, pulp mill effluent, biological treatment, bioreactors, fluidized beds 1734
- Dichloromethane**
biodegradation
groundwater, bioremediation 498
Hyphomicrobium, anaerobic conditions 3433
- 2,4-Dichlorophenol**
biodegradation
Flavobacterium 2547
polluted water, vegetables, enzymes 593
effects, pentachlorophenol, biodegradation, *Flavobacterium*, models 3476
removal, pulp mill effluent, biological treatment, bioreactors, fluidized beds 1734
- 2,4-Dichlorophenol + p-cresol**, biodegradation, anaerobic conditions 1528
- 2,4-Dichlorophenol + propionate**, biodegradation, anaerobic conditions 1528
- 2,4-Dichlorophenoxyacetic acid**, biodegradation, *Phanerochaete chrysosporium* 3598
- 3,5-Dichlorosyringol**, removal, pulp mill effluent, biological treatment, bioreactors, fluidized beds 1734
- Diclofop**, biodegradation, bacteria, algae, interactions 623
- Dicotyledons**
phenols
biodegradation
rhizosphere 3627
soil 3627
- Diesel oil**
biodegradation
polluted soils, composting 321
slow release fertilizers, polluted soils, USA 318
oil spills, bioremediation, bioventing, Australia 3241
polluted soils
bioremediation 319, 3230
Antarctica 3229
USA 316
- Digestion**, aerobic conditions, kinetics, sewage sludge 765
- Dihydrogen**, oxidation, *Azotobacter vinelandii*, genetics 2739
- Dihydroxyacetone**, production, glycerol, utilization, *Gluconobacter oxydans*, enzyme activity, glycerol oxidoreductases 1455
- 3,4-Dihydroxybenzoate**, decarboxylation, *Clostridium hydroxybenzoicum*, classification 1811
- Dimethyl phthalate**
biodegradation
microorganisms
sewage sludge, Bulgaria 2408
soil, Bulgaria 2408-2409
- Dimethyl sulfoxide**, biodegradation, anaerobic digesters, sludges, sulfate reducing bacteria, isolation 3445
- Dimethyl terephthalate**, production, waste water, biogas, production, anaerobic treatment, biomass, supports 1687
- Dimethylnaphthalene**
oxidation
Alcaligenes 2509
Pseudomonas 2509
- 2,4-Dimethylphenol**, biodegradation, Gram negative bacteria, freeze drying, survival 775
- 2,4-Dinitrophenol**, biodegradation, activated sludge, bacteria, techniques, enumeration 1537
- Dinitrotoluene**
biodegradation
Pseudomonas
genes
characterization 2429
cloning 2429
- Dinoflagellates**
toxins
mussels, contamination 943
red tides, fisheries, effects, Brunei 952
- Dinoflagellida**, toxins, fish, consumption, food poisoning, French overseas territories 2022
- Diols**, biodegradation, *Alcaligenes* 1503
- Dioxins**
biodegradation
anaerobes, sediment 3442
Staphylococcus auricularis 3501
- Diphenyl ether**, biodegradation, *Trichosporon beigeli* 2413
- Diphenyl methane**, hydrogenation, bacteria 748
- Diplachne fusca**, straw, saccharification, cellulase 2494
- Disinfectants**
cream, Enterobacteriaceae, control, Italy 2079
efficiency, surfaces, testing 1057
foods, *Salmonella*, control 3062
microbial corrosion 3058
p-aminobenzoic acid
foods
Escherichia coli, control 2162
Listeria monocytogenes, control 2162
Salmonella enteritidis, control 2162
pasteurized milk, Enterobacteriaceae, control, Italy 2079
poultry, carcasses, *Salmonella typhimurium*, control, keeping quality 1002
Pseudomonas aeruginosa, control 2165
solutions, chlorhexidine gluconate, contact lenses, *Serratia marcescens*, growth 3023
surfaces, rhinovirus 2160
synergism, water, bacteria, control 224
vegetables, bacteria, control, resistance 2005
- Disinfection**
chicken meat
skin
Salmonella typhimurium
chlorine 1007
ultrasonic treatment 1007
chlorine
Klebsiella pneumoniae, biofilms 3066
pathogens, removal, sewage 298
chlorine dioxide, pathogens, removal, sewage 298

Disinfection *cont.*

chloroisocyanurates, microbial contamination, swimming pools, bacteria, control 209

chopping boards

plastics, microbial contamination, pathogens 1053
wood, microbial contamination, pathogens 1053

drinking water

microbial contamination, conferences 827

pathogens, removal, Canada 2841
pipes, ultraviolet radiation 226
effects, water distribution, biofilms, growth 1052

hot water treatment, egg shell, *Salmonella enteritidis*, control 1008
kinetics, drinking water, biological treatment 3786

Listeria monocytogenes, surfactants, efficiency 1054

monochloramine, *Klebsiella pneumoniae*, biofilms 3066

monochloroamine, metals, surfaces, biofilms 2164

Pseudomonas aeruginosa, surfactants, efficiency 1054

residual effects, water distribution, pipes, bacterial count 3037

salmonella typhimurium, surfactants, efficiency 1054

sewage, sunlight 227

sewage effluent

ultraviolet radiation
bacteria, control, USA 2693
viruses, control, USA 2694

sprays, pigmeat, vacuum packaging, microbial contamination, control 976

Staphylococcus aureus, surfactants, efficiency 1054

surgical instruments, microbial contamination 208

ultra violet radiation

sewage, bioassays 305
waste water, bioassays 305

ultraviolet radiation

drinking water 3070
Bacillus pumilus, control 2159

sewage 1142

waste water 228, 1142

waste water, Italy 295

waste water treatment, reviews 1055

water

chlorine, viruses, removal 3065
copper + silver, viruses, removal 3065

water supply, viruses, inactivation, kinetics, mathematical models 2179

Disposal to land

hazardous wastes

Europe 364

North America 364

sewage sludge

Europe 364

management

UK 452

USA 452

North America 364

sludges

management

UK 452

USA 452

Dissolved oxygen, bioreactors, microbial

contamination, control 2998

Distillery effluent

aerobic treatment, *Aspergillus awamori*, Japan 2642

anaerobic digestion+pyrite 1676

anaerobic treatment, optimization 1678

biodegradation, single cell protein, production, *Aspergillus awamori* var. *kawachi* 463

sweet potato, biological treatment, *Geotrichum* 1835

waste water treatment

activated sludge 713

biological filtration 713

Distillery wastewater, protease, production, *Aspergillus usami* mut. *shirousami*, Japan 468

Distribution

flour mills

machinery

contamination

arthropods 2936

microorganisms 2936

Distribution systems, pipes, materials, water supply, *Legionella pneumophila*, biofilms, formation 3034

DNA, Adriatic Sea 3090

Documentation, biodeterioration, fungi, isolation, Egypt 3006

Domestic gardens

kitchen waste, composting, Germany 367

plant residues

composting

economics, cost analysis 2293

USA 3283

sewage, compost, production, correctional institutions, USA 360

wastes

composting

estimation, USA 1481

heat recovery 1255

kinetics 353

Drainage channels, spoil banks, heavy metals, uptake 1581

Drainage systems, collectors, roads,

bioreactors, evaluation 3357

Drainage water

selenium

removal

ponds, algae + bacteria, USA 3694

Thauera selenatis, USA 3697

Drains, wetlands, phosphorus, removal,

aquatic plants, Australia 1346

Dreissena polymorpha

larvae, removal, water supply, aluminium sulfate 223

phosphorus, removal, activated sludge 688

Dried egg, microbial contamination, control, packaging 2993

Dried fruit

grapes

effluents, anaerobic treatment, filters, earthworms 3890

production, waste water treatment, fermentation, ethanol production, Greece 1408

Dried milk

contamination, aflatoxins 174

Salmonella, detection, enzyme immunoassay 42

Dried skim milk

Salmonella

detection 881

immunomagnetic separation 2096

Drilling, emulsions, biodegradation, anaerobic treatment, screening 3402

Drinking water

Aeromonas

identification, chromatography 1911

phenotypes, distribution, Finland 2830

bacteria

bioassays 2181

β galactosidase, activity, isolation 1913

bacteriophages, monitoring, Israel 2898

biodeterioration, bacteria, isolation, detection, comparisons 855

biological filtration

ammonia, removal, UK 742

iron, removal, UK 742

manganese, removal, UK 742

nitrification, design 1750

sand, viruses, removal 2897

biological treatment, disinfection, kinetics 3786

bottled, microbial contamination,

Pseudomonas, Greece 26

chlorinated

coliform bacteria, detection, culture media 3192

Escherichia coli, detection, culture media 3192

Drinking water *cont.*

chlorine dioxide, antimicrobial activities 3073

coliform bacteria, detection, rapid methods, India 1915

contamination

Legionella pneumophila, detection, evaluation 2853

Microcystis aeruginosa, sheep, poisoning 29

Cryptosporidium, oocysts, recovery, filtration 1852

cyanobacteria, toxins 2899

denitrification

bacteria

identification, isolation 2848

immobilization, poly(vinyl alcohol), gels 3710

biofilms, adhesion, electrodes, mathematical models 676

biological fixed-film systems 3789

bioreactors

sludges

granular, formation 1742

granules 3790

mathematical models 680

disinfection

pathogens, removal, Canada 2841

sterilizing, evaluation 2890

ultraviolet radiation 3070

Bacillus pumilus, control 2159

Bacillus subtilis, control 3072

enteric viruses, risk assessment, techniques, South Africa 2892

Escherichia coli

determination, gene probes 824

identification, culture media 1916

isolation, culture media 1916

glass, biomass, formation 3019

hepatitis A virus, detection, polymerase chain reaction 3903

Klebsiella oxytoca

identification, culture media 1916

isolation, culture media 1916

Legionella pneumophila, biofilms, detection, gas chromatography+mass spectrometry 1906

manganese, removal, biological filtration, sand, nitrates, effects 741

microbial contamination

disinfection, conferences 827

techniques, Chile 25

microbial quality, standards 288

nitrates, removal, biological treatment, fluidized beds, Germany 1743

ozone, antimicrobial activities 3073

pathogens, removal, water purification, tablets 3071

pipes, disinfection, ultraviolet radiation 226

poliovirus, determination, gene probes 2903

polioviruses, contamination, techniques, concentration 2864

pollution, faecal coliforms, indicator species, France 861

removal, toxins, production, *Microcystis aeruginosa*, activated carbon 1741

sulfite reducing bacteria, *Clostridium*, enumeration, comparison 2896

teflon, biomass, formation 3019

Thermus scotoductus, new species, Iceland 1080

treatment, cyanobacteria, mycrocystin 2901

viruses

filters, sand, sorption 2904

recovery, filters 2888

removal, coal, substrates 236

techniques, concentration, microfiltration 2867

water purification, units, pathogens, removal 3067

Drugs, production, *Streptomyces noursei*, biomass, wastes, heavy metals, uptake, mathematical models 1585

Dust

air conditioners, Gram negative bacteria, monitoring 3111

filters, industry, zinc, bacterial leaching, leaching agents, citric acid 2598

Dwellings, air, aerosols, molds 283**Dyes**

- azo compounds
 - decolorization
 - biological treatment, anaerobic conditions, microbial flora 3772
- Pseudomonas luteola*, Taiwan 1738
- inhibition, biological fixed-film systems, biofilms, microbial activities 1280
- biodegradation
 - bacteria, reviews 1598
 - biological fixed-film systems, anaerobic treatment, activated sludge 2652
 - fungi, reviews 1598
 - helminths, reviews 1598
- decolorization
 - Actinomycetales 724
 - Geotrichum candidum*, peroxidases 3781
 - Phanerochaete chrysosporium*, enzymes 3683
 - wood destroying fungi 3780
- removal, activated sludge, performance, assessment 391
- triphenylmethane, discoloration, biological treatment, fungi 2664
- waste water, biological treatment, reed beds, gravel 1355

Earthworms, filters, dried fruit, grapes, effluents, anaerobic treatment 3890**Eastern Europe, waste water treatment, management 1147****EC Regulations, discussion, pollution, prevention, control 287****Economic analysis, foods, wastes, composting, USA 3278****Economics**

- cost analysis, domestic gardens, plant residues, composting 2293
- externalities, algal blooms, waterways, Australia 3140
- food wastes, composting, USA 366
- foodborne diseases, Croatia 842
- plant residues, composting, USA 366
- wood residues, composting, USA 366

Ecosystems, grain stores, reviews 76**Ectothiorhodospira shaposhnikovii**

- biogas, desulfurization, hydrogen sulfide, removal 2609
- waste water, desulfurization, hydrogen sulfide, removal 2609

Ecuador

- Mexico, China, shrimps, microbial contamination, retail marketing, whole-sale marketing, comparisons 938
- shrimps, microbial contamination, reviews 939

Edible fungi

- production, wheat straw, utilization, heat treatment 1403
- soyabeans, wastes, biomass production 2373

Effluent discharge, nutrients, levels, rivers 1604**Effluents**

- anaerobic treatment
 - dried fruit, grapes, filters, earthworms 3890
 - reviews 429
- bacteriophages, inactivation, ultraviolet radiation, kinetics 2242
- coliform bacteria, inactivation, titanium dioxide, light 3089
- disinfection, ultraviolet radiation, *Escherichia coli*, recovery 3044
- fatty acids, waste water treatment, biological fixed-film systems, methane production 2392
- heavy metals, removal, *Saccharomyces cerevisiae*, uptake, filtration 3667
- irrigation
 - sewage, biological treatment, Kuwait, performance 2363
 - waste water, biological treatment, Kuwait, performance 2363

Effluents cont.

- microbial contamination
 - coliform bacteria
 - control
 - filtration 3165
 - flocculation 3165
 - irradiation 3165
 - organic acids, biodegradation, yeasts 3408
 - quality
 - activated sludge, ciliates, indicator species 1842
 - biological fixed-film systems, variation 347
 - recirculation
 - denitrification, biological treatment, ponds + lagoons, aeration 3716
 - nitrification, biological treatment, ponds + lagoons, aeration 3716
 - recycling, vermiculture 3359
 - seawater
 - Enterococcus*, inactivation, solar radiation 3167
 - faecal coliforms, inactivation, solar radiation 3167
 - viruses
 - inactivation, titanium dioxide, light 3089
 - techniques, detection, DNA probes 2868
 - waste water treatment, biochemical oxygen demand, determination, bioassays 296
 - water reuse, irrigation, standards 288
- Egg products, biodeterioration, microbial contamination, India 2066**
- Egg shell, *Salmonella enteritidis*, control, hot water treatment 1008**
- Eggs**
 - contamination
 - Salmonella enteritidis*
 - phenotypes, detection 2995
 - reviews 1793
 - cooling, microbial contamination, *Salmonella enteritidis* 2987
 - Listeria*, detection 1004
 - microbial contamination, *Salmonella* 2077
 - Salmonella enteritidis*
 - detection, iron, supplements 1896
 - growth, storage 2071
 - survival
 - cold storage, washing, water, pH 1001
 - hands 1886
 - surfaces 1886
 - storage, *Salmonella enteritidis*, growth, heat treatment, resistance 2990
 - washing
 - water
 - Salmonella enteritidis*
 - control
 - pH, USA 1096
 - temperature, USA 1096
 - waste water
 - Listeria monocytogenes*, inhibition, mathematical models 999
 - Salmonella typhimurium*, inhibition, mathematical models 999

Egypt

- biscuits, biodeterioration, fungi 83
- cigarettes, mycotoxins, fungi 912
- documentation, biodeterioration, fungi, isolation 3006
- salted fish
 - Clostridium botulinum*, bacterial toxins, food poisoning 2013
- proteinases
 - production
 - microorganisms
 - identification 113
 - isolation 113
- sewage
 - anaerobic treatment, bioreactors 2285
 - biological treatment, oxidation ditches 2338
- tombs, biodeterioration, microorganisms, control 193
- waste water treatment, ponds, *Lemna gibba* 2339

Egypt cont.

- wood borers
 - isopoda
 - marine environment
 - bacteria, associations 3820
 - fungi, associations 3820

Eichhornia crassipes

- biodegradation, feeds, production, *Pleurotus ostreatus*, growth, kinetics 3528
- heavy metals
 - uptake 3888-3889
 - rivers, Zimbabwe 2587
- metals, adsorption 589
- nutrients, removal, sewage effluent, iron, effects, Spain 1612
- phenolic compounds, adsorption 589
- polluted water, lead, removal, bioremediation 2588
- ponds, sewage, biological treatment 2271
- recycling, vermiculture 3359
- sewage, nutrients, removal, Jamaica 3887
- utilization, biogas, production, anaerobic digestion, methodology, kinetics 484
- waste water, biological treatment, Morocco 1362

Electric field**pulsed**

- Escherichia coli*, inactivation, foods 3078
- Staphylococcus aureus*, inactivation, foods 3078

Electron microscopy, cryo-electron microscopy, poly(vinyl)chloride, biodeterioration, fungi 1017**Electroplating waste water, heavy metals, starch, biodegradation, anaerobes, methane inhibitors 1221****Emulsifiers****production**

- Bacillus stearothermophilus* 3647
- petroleum hydrocarbons, biodegradation, *Candida tropicalis* 2500

Emulsions,

structure, pathogens, growth

1881

Encapsulation

- ammonia, removal, *Escherichia coli* 2743
- urea, removal, *Escherichia coli* 2743

Endomycopsis fibuligera*, enzymes, dates, wastes, biodegradation 3759*Endotoxins****air**

- contamination, sampling, comparisons 3157
- detection 2919
- sampling 2919
- structure activity relationships, bacteria, reviews 892

Energy**production**

- anaerobic treatment, plant residues, developing countries 3394
- biomass, thermal degradation, Canada, European Union 2812

Energy sources, hydrogen, production, algae 1589**England, seafoods, contamination, *Listeria monocytogenes* 2028*****Entamoeba histolytica*, polluted water, concentration, India 2778****Enteral feeding****hospitals**

- homes
 - microbial contamination
 - Enterobacter cloacae* 15
 - Klebsiella* 15

Enteric viruses, drinking water, risk assessment, techniques, South Africa 2892***Enterobacter aerogenes***

- carboxy-lyases, inhibition, spices 2168

control

- mackerels
 - spoilage
 - cloves 2953
 - sodium chloride 2953
- molasses, biodegradation, hydrogen, production 717

Enterobacter agglomerans

- galactitol, biodegradation, D-tagatose, production 475

- Enterobacter agglomerans** *cont.*
glycerol trinitrate, biodegradation 3456
polysaccharides, production, *Acer saccharum*, sap, utilization 3383
- Enterobacter cloacae**
bioreactors, chromates, removal, waste water 1666
microbial contamination, enteral feeding, hospitals, homes 15
survival, mineral waters, microbial contamination 858
- Enterobacteriaceae**
beef, modified atmosphere storage, differentiation, culture media 52
biological control, protozoa, fresh water 1069
bottled water
mineral waters, microbial contamination, Germany 2887
springs (water), microbial contamination, Germany 2887
control
cream, disinfectants, Italy 2079
pasteurized milk, disinfectants, Italy 2079
food, identification, polymerase chain reaction 884
foodborne diseases, reviews 844
 β -lactams, antimicrobial properties, determination 1050
nitrates, utilization, enzymes, synthesis, regulation, genetics 1795
nitrites, utilization, enzymes, synthesis, regulation, genetics 1795
offal, vacuum packaging, microbial contamination, determination 2037
poultry meat, quality, monitoring, enumeration 149
- Enterococci**
foods, identification 3905
water, identification 3905
- Enterococcus**
cheeses, *Streptococcus*, enumeration 2906
identification, RNA probes 2847
inactivation
effluents, seawater, solar radiation 3167
sewage, seawater, solar radiation 3167
sewage effluent, sea water, solar radiation 3168
meat, *Streptococcus*, enumeration 2906
- Enterococcus durans**, survival, rivers, water, techniques, monitoring 3148
- Enterococcus faecalis**
inhibition, bacteriocins, production, *Leuconostoc carnosum* 230
meat, microbial contamination, determination, plate count 132
milk
bacteriocins
production
Listeria innocua, control 1064
Listeria monocytogenes, control 1064
- Enterococcus faecium**
cod, antibacterial properties 1066
control, *Listeria monocytogenes*, control by 1066
milk
bacteriocins
production
Listeria innocua, control 1064
Listeria monocytogenes, control 1064
- Enterotoxins**
foods
Bacillus cereus, detection 2920
contamination, *Staphylococcus aureus*, detection, ELISA 36
Staphylococcus aureus, detection, enzyme immunoassay 41
heat stability, *Bacillus cereus* 1952
orange juice, *Bacillus cereus* 95
production
Bacillus cereus, detection, immunoassay, comparisons 57
butter, *Pseudomonas aeruginosa* 157
chickens, carcasses, *Staphylococcus aureus* 2070
- Enterotoxins** *cont.*
production *cont.*
foods, *Staphylococcus aureus*, identification, pulsed field electrophoresis 1898
ice cream, *Pseudomonas aeruginosa* 157
milk, *Pseudomonas aeruginosa* 157
Staphylococcus aureus, heat treatment, survival 1947
Yersinia enterocolitica 2915
- Enterovirus**
groundwater, detection 2773
sewage sludge, detection, polymerase chain reaction 1144
- Environment**
aerobic conditions, toxic chemicals, biodegradation, techniques, assessment 3412
anaerobic conditions, selenium, transformation, microorganisms 3696
aromatic compounds, biodegradation, aerobes + anaerobes, bioremediation 2268
Escherichia coli
genetically engineered microorganisms, detection, genetics 1141
heat resistance 1092
genetically engineered microorganisms, detection 2777
glufosinate, utilization, Gram negative bacteria 629
methanogenic, anaerobes, interactions 1803
samples, Legionellae, recovery, filters, membrane 3122
surfactants, biodegradation, reviews 1568
toxic substances, bioremediation, USA 310
- Environmental assessment**, techniques, monitoring, ecosystems 3200
- Environmental degradation**, bioremediation, techniques, instrumentation, membranes 3212
- Environmental factors**
effects, biological filtration, aerobic treatment, bacteria, populations, techniques, determination, quinones 1281
polyethylene films, biodegradation, starch, microorganisms 1543
- Environmental impact**
assessment, wastes, management, books 275
climatic change, books 834
food industry, books 2800
genetically engineered microorganisms, release 3202
herbicides, biodegradation, reviews 1555
pesticides, biodegradation, reviews 1555
- Environmental management**, landfills 453
- Enzyme activity**
 α -amylase, waste water, carbohydrates, biodegradation, activated sludge 2710
anchovies, bacteria, histamine, production, Spain 119
denitrification, waste water, mathematical models 3735
glycerol oxidoreductases, glycerol, utilization, *Gluconobacter oxydans*, dihydroxyacetone, production 1455
lignin, biodegradation, *Phanerochaete chrysosporium*, mutants 2756
lignocellulose, biodegradation, *Hypsizygus marmoreus* 539
Listeria monocytogenes
culture media
acetic acid 1099
hydrochloric acid 1099
palm kernel meals, biodegradation, fungi 2495
Photobacterium histaminum, viability, cold storage 1098
Photobacterium phosphoreum, viability, cold storage 1098
Pseudomonas marginalis
growth
pH, effects 3106
sodium chloride, effects 3106
temperature, effects 3106
- Enzyme activity** *cont.*
stain fungi, wood, detection 2105
sunflower meals, biodegradation, fungi 2495
wood, biodegradation, biofilms, aquatic environment, Australia 2479
wood destroying fungi, assays 1851
- Enzymes**
activated sludge, foaming, control 1320
alcohol oxidoreductases, aromatic hydrocarbons, biodegradation, *Pleurotus eryngii*, hydrogen peroxide, production 582
aldehyde dehydrogenase, phenols, biodegradation, *Pseudomonas* 586
aliphatic hydrocarbons, biodegradation, *Methylosinus trichosporium*, determination, polymerase chain reaction 796
alkaline proteinase, poultry, feathers, upgrading, proteins, production 1417
 β -amylase, *Clostridium thermocellum*, starch, biodegradation 798
 α -amylase, enzyme activity, waste water, carbohydrates, biodegradation, activated sludge 2710
amylases
cellulose, biodegradation, *Pseudomonas cellulosa* 2484
production
maize cobs, utilization, fungi, cells, immobilization 1479
starch
biodegradation
Humicola lanuginosa, growth effects 3604
Rhizomucor pusillus, growth effects 3604
arabinofuranosidase, characterization, lignin, biodegradation, *Bacillus stearothermophilus* 3834
aromatic compounds
biodegradation
Phanerochaete chrysosporium
characterization 508
purification 508
Aspergillus niger, lactose, fermentation, genetic engineering 3766
beta-galactosidase, techniques, determination, colorimetry, sewage, faecal coliforms 3194
biomass, conversion, fuels, production, books 3914
biphenyl, biodegradation, *Pseudomonas* 585
biphenyl 2,3-dioxygenase, carbazole, biodegradation, bacteria 3507
books
characterization 2814
detection 2814
carbohydrates, catabolism, *Pseudomonas aeruginosa*, genetics 779
carboxy-lyases, inhibition, *Enterobacter aerogenes*, spices 2168
catalases
enzyme activity
waste water treatment
activated sludge, monitoring 1208
ponds, monitoring 1208
rivers, monitoring 1208
catechol 2,3-dioxygenase, characterization, pyrocatechol, biodegradation, *Pseudomonas putida* 2250
cellulase, supplementation, rice straw, saccharification, *Schizophyllum commune*, cellulases, fungi 1833
cellulase+cellulases, rice straw, saccharification, ethanol production 1474
cellobiohydrolase
Phanerochaete chrysosporium, genetics 3872
Trichoderma longibrachiatum 2765
cellobiohydrolases, oligosaccharides, hydrolysis, *Trichoderma longibrachiatum*, models 548
cellobiose dehydrogenase, production, cellulose, biodegradation, *Phanerochaete chrysosporium* 2759

Enzymes cont.

- cellobiose hydrogenase
- cellulose, biodegradation, *Phanerochaete chrysosporium* 2482
- lignin, biodegradation, *Phanerochaete chrysosporium* 2482
- xylan, biodegradation, *Phanerochaete chrysosporium* 2482
- cellulase
 - activity
 - cellulose, biodegradation, *Streptomyces* 3512
 - cellulosic wastes, biodegradation, *Streptomyces* 3512
 - Clostridium* 2718
 - Humicola fuscoatra* 1834
 - refuse, biodegradation, *Trichoderma longibrachiatum* 2768
 - agricultural byproducts
 - saccharification
 - Arthrographis* 2470
 - Sporotrichum pruinosum* 2470
 - Cellulomonas*
 - cloning 806
 - nucleotide sequences 806
 - cellulose, biodegradation, *Pirimonas communis* 3884
 - cellulosomes, cellulolytic microorganisms, bacteria 1789
 - characterization
 - Aspergillus niger* 2762
 - Bacillus polymyxa* 2728
 - Diplachne fusca*, straw, saccharification 2494
 - kinetics
 - cellulose, hydrolysis 2483
 - Clostridium thermocellum*, hardwoods, pretreatment, biodegradation 1470
 - production
 - apple pomace
 - utilization
 - Aspergillus niger* 2487
 - Trichoderma viride* 2487
 - Aspergillus niger*, rice straw, biodegradation 3532
 - Bacillus*
 - composts, isolation 1784
 - soil, isolation 1784
 - Bacillus subtilis*, detection, SDS-PAGE 1785
 - cellobiose, utilization, *Clostridium thermocellum* 540
 - cellulose
 - biodegradation
 - Clostridium thermocellum* 2475
 - Streptomyces hygroscopicus* 3523
 - Leptochloa fusca*, straw, utilization, thermophilic fungi 2491
 - Myrothecium verrucaria*, detection, SDS-PAGE 1785
 - Streptomyces*
 - composts, isolation 1784
 - soil, isolation 1784
 - sugarcane bagasse
 - fermentation
 - Aspergillus phoenicis* 3510
 - Trichoderma longibrachiatum* 3510
 - Thermomonospora curvata*, sugarcane bagasse, biodegradation 716
 - Trichoderma reesei*, detection, SDS-PAGE 1785
 - properties, *Trichoderma viride*, cellulose, biodegradation 1475
 - waste paper, hydrolysis, bioreactors, *Pseudomonas fluorescens* 3773
 - xylanases, cellulose, biodegradation, *Clostridium papyrosolvans* 2490
- cellulases
 - cellulose, biodegradation, *Trichoderma reesei* 545
 - kraft pulp, bleaching, *Trichoderma longibrachiatum* 729

Enzymes cont.

- cellulases cont.
 - paints, thickeners, biodegradation, reviews 198
 - Trichoderma longibrachiatum*, ultra-structure 804
- cellulose
 - biodegradation, *Trichoderma longibrachiatum* 552
 - hydrolysis, *Trichoderma koningii*, genetics 547
- cellulosomes, cellulase, cellulose, biodegradation, *Clostridium thermocellum* 1790
- characterization
 - acetoin, biodegradation, *Pelobacter carbinolicus* 2746
 - Bacillus subtilis*, composts 2707
 - chlorohydroxyquinol, biodegradation, *Streptomyces rochei* 1516
 - nitrobenzene, biodegradation, *Pseudomonas pseudoalcaligenes* 3248
 - polyurethanes, biodegradation, *Curvularia senegalensis*, soil 509
 - toluene, biodegradation, *Pseudomonas putida* 3552
 - xylene, biodegradation, *Pseudomonas putida* 3552
- chitinase
 - chitin
 - biodegradation
 - Bacillus pabuli*, assays 823
 - bacteria, assays 823
 - biochemistry, *Bacillus circulans* 607
- chitinases, fungi, techniques, detection 2785
- complexes, xylan, biodegradation, reviews 543
- 2,4-D, biodegradation, *Alcaligenes eutrophus* 622
- dehalogenase
 - Pseudomonas*, cloning, gene expression 3839
 - Pseudomonas putida*, genes, nucleotide sequences 3841
 - Xanthobacter autotrophicus*, genes, nucleotide sequences 3842
- dehalogenases, *Pseudomonas*, cloning, gene expression 3840
- dioxygenase
 - genetics
 - 3-carboxydiphenyl ether, biodegradation, *Pseudomonas pseudoalcaligenes* 2447
 - 4-carboxydiphenyl ether, biodegradation, *Pseudomonas pseudoalcaligenes* 2447
- dioxygenases, inactivation, *Pseudomonas* 2717
- endoglucanase, synthesis, wheat straw, biodegradation, *Thermomonospora fusca* 1482
- entrapment, glass, denitrification, bacteria 2722
- enzyme activity, xylanase, basidiomycetes 2770
- esterase, polyesters, biodegradation, bacteria, *Corynebacterium* 1019
- esterases
 - Acinetobacter wolffii*, gene expression 786
 - Escherichia coli*
 - gene expression 786
 - genetic transformation 786
 - lubricant, biodegradation, *Micrococcus roseus* 3691
 - production, *Bacillus thermoglucosidarius*, isolation, sewage sludge 792
- evaluation, wheat straw, biodegradation, fungi 3526
- Flavobacterium*, nylon, manufacture, wastes, biodegradation 3608
- formate dehydrogenases, production, *Escherichia coli*, reviews 1101

Enzymes cont.

- β -fructofuranosidase, production, apple pomace, utilization, *Aspergillus* 3384
- β galactosidase, activity, drinking water, bacteria, isolation 1913
- α -galactosidase
 - production
 - food wastes
 - soyabeans, *Monascus anka* 2360
 - sugarcane, *Monascus anka* 2360
- Geotrichum*, 3-carbonyl butanoate, biodegradation, chemical properties, effects 3486
- glucanases, starch, biodegradation, industrial applications 3387
- glucoamylase, production, cassava, fermentation, *Rhizopus* 1406
- glucose oxidase
 - catalase
 - shrimps
 - preservation 116
 - spoilage, *Pseudomonas fluorescens*, control 116
- β -glucosidase
 - production, *Aspergillus terreus* 2757
 - Trichoderma longibrachiatum*, genetic engineering 810
- glucosidases
 - cellulose, biodegradation, *Sporotrichum thermophile* 2755
 - production, cellulose, biodegradation, *Phanerochaete chrysosporium* 2759
- glutathione transferase, pentachlorophenol, biodegradation, *Flavobacterium*, genetics 591
- glyoxal oxidase, *Phanerochaete chrysosporium*, DNA, cloning 1836
- haloalkones, biodegradation, *Rhodococcus erythropolis* 3434
- halogenated hydrocarbons
 - biodegradation 2452
 - Rhodococcus rhodochrous* 518
- histidine decarboxylase, genes, lactic acid bacteria, detection, polymerase chain reaction 2781
- hydrogenases, production, *Escherichia coli*, reviews 1101
- 4-hydroxy-2-hetovaleate aldolase, phenols, biodegradation, *Pseudomonas* 586
- invertase, production, molasses, utilization, *Saccharomyces cerevisiae* 2381
- isocitrate dehydrogenase, characteristics, alkanes, biodegradation, *Candida tropicalis* 2514
- keratinase
 - poultry
 - feathers, biodegradation, *Bacillus licheniformis* 756
 - hair, biodegradation, *Bacillus licheniformis* 756
 - skin, biodegradation, *Bacillus licheniformis* 756
- kinetics, trichloroethylene, biodegradation, *Nitrosomonas europaea*, mathematical models 2456
- laccase
 - characterization, *Cucumis sativa*, calorimetry 1832
 - enzyme activity, *Pleurotus eryngii*, homoveratric acid, biodegradation 1469
 - isoenzymes, *Trametes versicolor*, kraft mill effluent, lignin, biodegradation 3520
 - purification, lignin, biodegradation, *Trametes sanguinea* 3529
- D-lactate, production, lactose, fermentation, *Lactobacillus bulgaricus* 1808
- lactate dehydrogenase, lactic acid, utilization, *Clostridium acetobutylicum* 3426
- lactoperoxidase, *Salmonella typhimurium*, inhibition, temperature 217

Enzymes cont.

- lignin
 - biodegradation
 - Corioliopsis polysona* 553
 - Coriolus versicolor* 553
 - fungi 2769
 - Phanerochaete chrysosporium* 553
- lignin peroxidase
 - activity
 - lignin, biodegradation, *Phanerochaete chrysosporium* 3001
 - veratryl alcohol
 - regulation
 - manganese
 - Bjerkandera* 3182
 - Phanerochaete* 3182
 - 2-chlorophenol, biodegradation, *Phanerochaete chrysosporium* 583
 - modification, kinetics, organic nitrogen compounds, biodegradation 2455
 - Phanerochaete chrysosporium*, gene expression, evaluation 3132
 - phenanthrene, biodegradation, *Phanerochaete chrysosporium* 3551
 - production, *Phanerochaete chrysosporium*, immobilization, polystyrenes 583
 - synthesis
 - Phanerochaete chrysosporium*
 - immobilization
 - lignin
 - biodegradation
 - air, effects 3519
 - carbon-to-nitrogen ratios, effects 3519
 - ligninase, production, surfactants, *Phanerochaete chrysosporium* 634
 - lyases, phosphonic acids, biodegradation, *Rhizobium*, volatile compounds, production 2411
 - manganese peroxidase
 - Phanerochaete sordida*, wood pulp, biological treatment, bleaching, metals, effects 2657
 - production, *Trametes versicolor*, sulfite pulping, wastes, delignification 3778
 - mannanase, production, *Bacillus subtilis*, coconuts, waste, carbohydrates, mannans, utilization 2383
 - mannanases
 - galactoglucomannans
 - biodegradation
 - Bacillus subtilis* 533
 - Trichoderma reesei* 533
 - methane monooxygenase, synthesis, trichloroethylene, biodegradation, *Methylomonas methanica* 3487
 - monooxygenase, methanesulfonic acid, utilization, bacteria 658
 - naphthalene 1,2-dioxygenase, carbazole, biodegradation, bacteria 3507
 - naphthalene dioxygenase, naphthalene, biodegradation, *Pseudomonas fluorescens*, photometry 1855
 - nitrate reductase, production, *Escherichia coli*, genetics, reviews 1100
 - nitrite reductases, nitrites, reduction, *Paracoccus denitrificans*, genetics 1796
 - nucleases
 - Vibrio cholerae* 2197
 - Vibrio parahaemolyticus* 2198
 - oxidoreductases, production, wood, biodegradation, wood destroying fungi 3525
 - oxygenases
 - activity
 - chloroform, biodegradation, *Methylosinus trichosporium*, *Pseudomonas putida* 3446
 - trichloroethylene, biodegradation, *Methylosinus trichosporium*, *Pseudomonas putida* 3446
 - paper, bleaching, pretreatment 731

Enzymes cont.

- pectate lyase
 - production, bacteria, plant residues, biodegradation, fuels, production 3397
 - uronic acids, biodegradation, *Erwinia carotovora* 1458
- pectinase, production, wastes, pectins, biodegradation, anaerobes 2489
- pentachlorophenol, biodegradation, *Flavobacterium* 610
- pentachlorophenol-4-monooxygenase
 - pentachlorophenol
 - biodegradation
 - gene expression
 - Escherichia coli* 781
 - Flavobacterium* 781
- peroxidases
 - azo compounds
 - biodegradation
 - Phanerochaete chrysosporium* 1449
 - Streptomyces chromofuscus* 1449
 - dyes, decolorization, *Geotrichum candidum* 3781
 - lignin, biodegradation, *Agaricus bisporus* 3518
 - phenolic compounds, biodegradation, products, toxicity, screening 2545
 - polycyclic hydrocarbons, biodegradation, *Bjerkandera* 1471
 - synthesis, wheat straw, biodegradation, *Thermomonospora fusca* 1482
 - waste water, phenols, biodegradation, *Coprinus macrorhizus* 584
- Phanerochaete chrysosporium*, gene induction, heat shock 3883
- phenolic compounds, biodegradation, reaction products, toxicity 1535
- phenols, biodegradation, *Pleurotus ostreatus* 542
- phosphodiesterase
 - Bradyrhizobium*, organophosphorus pesticides, biodegradation, soil 625
 - Rhizobium*, organophosphorus pesticides, biodegradation, soil 625
- phosphotriesterase
 - Bradyrhizobium*, organophosphorus pesticides, biodegradation, soil 625
 - Rhizobium*, organophosphorus pesticides, biodegradation, soil 625
- plastics, starch, biodegradation, nuclear magnetic resonance spectroscopy 605
- polluted water, 2,4-dichlorophenol, biodegradation, vegetables 593
- polychlorinated biphenyls, biodegradation, *Pseudomonas* 1530
- poly(3-hydroxyoctanoic acid)
 - depolymerase
 - enzyme activity, poly(3-hydroxyoctanoic acid), biodegradation, bacteria 3613
 - synthesis, poly(3-hydroxyoctanoic acid), biodegradation, bacteria 3613
- polysaccharidases, addition, wheat straw, biodegradation, bacteria 550
- production
 - barley straw, biodegradation, *Sporotrichum thermophilum* 1472
 - cellulose, biodegradation, *Sporotrichum thermophilum* 1472
 - lignocellulosic wastes, utilization, *Thermomyces lanuginosus* 555
 - maize cobs, utilization, *Thermomyces lanuginosus* 555
 - microorganisms, biodiversity 1783
 - optimization, *Schwanniomyces occidentalis*, starch, biodegradation, culture media, toxicity 1826
 - Phanerochaete chrysosporium*, temperature 1829
 - Saccharomyces cerevisiae*, genetics, gene sequencing 1828

Enzymes cont.

- production cont.
 - tannery waste, catechin, biodegradation, *Pseudomonas solanacearum* 3783
- wheat straw
 - biodegradation
 - Ganoderma lucidum* 2752
 - Pleurotus sajor caju* 2752
 - Pycnoporus sanguineus* 2752
 - Sporotrichum thermophilum* 1472
- propane monooxygenase, *Mycobacterium vaccae*, chlorinated hydrocarbons, biodegradation 1518
- properties
 - p*-hydroxybenzoate, biodegradation, *Moraxella* 3447
 - tetrachloroethylene, biodegradation, *Dehalosporium multivorans* 2454
- proteases, production, cellulose, biodegradation, *Phanerochaete chrysosporium* 2759
- proteinases
 - heat treatment
 - milk, *Pseudomonas* 2082
 - whey, *Pseudomonas* 2082
 - lignin, biodegradation, *Phanerochaete chrysosporium* 2763
- production
 - characterization, whey, utilization, *Aureobasidium pullulans* 710
 - foods, *Aeromonas hydrophila*, survival 1887
 - Penicillium griseofulvum* 2421
 - salted fish
 - microorganisms
 - identification, Egypt 113
 - isolation, Egypt 113
- protopectinases, microorganisms 770
- purification, 2,4-D, biodegradation, *Pseudomonas cepacia* 618
- reductases, inactivation, blue light, nitrophenols, biodegradation, *Rhodobacter capsulatus* 2723
- reduction, activity, aflatoxin, biosynthesis, *Aspergillus parasiticus* 2859
- refuse, anaerobic digestion, methane production 763
- Saccharomyces cerevisiae*, lactose, fermentation, genetic engineering 3766
- starch, hydrolysis, *Saccharomyces cerevisiae* 1547
- sulfur
 - metabolism, *Desulfurolobus ambivalens* 1814
 - reduction, *Pyrococcus furiosus* 3679
- superoxide dismutase, *Listeria monocytogenes* 3113
- thiosulfate dehydrogenase, characterization, *Thiobacillus acidophilus* 2732
- transferases, production, starch, biodegradation, *Bacillus firmus* 2568
- triacylglycerol lipase, polyesters, biodegradation, *Rhizopus delemar* 2564
- Trichoderma viride*, apples, cellulose, biodegradation, xyloglucans, effects 2951
- wood destroying fungi 556
- xylan
 - biodegradation
 - fungi, screening 814
 - Rhodothermus marinus* 3873
 - Streptomyces lividans*, genetics, disruption 802
- xylanase
 - Bacillus stearothermophilus*, nucleotide sequences 3844
 - Bacillus subtilis*
 - gene expression 1806
 - gene transfer 1806
 - characterization
 - Aureobasidium pullulans* 3871
 - Bacillus* 2727
 - Thermomonospora fusca*, nucleotide sequences 3879

Enzymes cont.

xylanase cont.

characterization cont.

wheat straw, biodegradation,
Thermoascus aurantiacus
2753

production

agricultural wastes
biodegradation

Fusarium oxysporum,
mutants 3515
Streptomyces 3804

apple pomace

utilization

Aspergillus niger 2487
Trichoderma viride 2487

Aspergillus niger 1827

rice straw, biodegradation
3532

Bacillus cereus, genetic engineer-
ing 2726

Caldocellum saccharolyticum,
gene transfer, *Saccharo-
myces cerevisiae*, genetic
improvement 1831

cellobiose, biodegradation, *Clos-
tridium* 2736

cellulose, biodegradation,

Trichoderma reesei 535

Chaetomium globosum 1827

genes, xylan, biodegradation,
Fibrobacter succinogenes
3534

lactose, biodegradation, *Clostrid-
ium* 2736

plant residues, biodegradation,

Aspergillus ochraceus 2376

sugars, utilization, *Bacillus circu-
lans* 608

xylan

biodegradation

Clostridium 2736

Trichoderma reesei 535

utilization, *Bacillus circulans*
608

synthesis, wheat straw, biodegrada-
tion, *Thermomonospora fusca*
1482

xylan

biodegradation

Bacillus stearothermophilus,
genes, identification,
identification 3901

Streptomyces, characterization
3524

hydrolysis, *Actinomadura*, genes,
cloning 803

xylanases

characterization

straw, biodegradation, *Strepto-
myces cyaneus* 2749

xylan, biodegradation, *Strepto-
myces cyaneus* 2749

comparison, fungi 808

production, *Aspergillus*, characteriza-
tion, India 2764

purification, *Humicola*, wood pulp,
bleaching 805

xylan, biodegradation, *Irpex lacteus*
546

 β -xylosidase

production, plant residues,

biodegradation, *Aspergillus
ochraceus* 2376

xylan, biodegradation, *Bacillus
stearothermophilus*, genes, iden-
tification, identification 3901

Enzymes + coagulants, phenols, removal,
waste water 3587

Epicoccum, parchment, biodeterioration
3005

Epoxyalcanes, biodegradation, *Xanthobacter*
2522

EPTC

biodegradation

Rhodococcus

biochemical pathways 3620

genetic analysis 3619

soil, *Rhodococcus* 3628

Equations, activated sludge, oxidation 390

Equipment

aeration

oxidation ditches, testing 3334
stirring, sewage, biological treatment,
upgrading 1778

comparisons

air microbiology

detection 2852

sampling 2852

contamination, poultry, processing, *Lis-
teria*, South Africa 1003

meat, processing, *Staphylococcus*,
benzalkonium chloride, resistance
240

microbial contamination, determination,
ultrasonic treatment 205

poultry meat, processing, *Staphylococcus*,
benzalkonium chloride, resistance
240

spacecraft, microbial contamination 206

Eragrostis tef, contamination, pathogens,
control, lactic acid bacteria, effects
2933

Erwinia carotovora

control, potatoes, postharvest decay, cal-
cium 928

population dynamics, potatoes, storage

decay, microbial contamination 927

uronic acids, biodegradation, pectate
lyase 1458

vegetables, enzyme activity 264

Escherichia coli

ammonia, removal, encapsulation 2743

antibiotics

resistance

sewage, France 331

sewage effluent, France 331

bacterial toxins, meat, detection 3896

bacteriophages

detection

sewage

Finland 767

Nicaragua 767

survival

indicator species

viruses

assessment

groundwater 3146

waste water 3146

beef

carcasses, decontamination, methodol-
ogy, comparisons 2044

cytotoxin, production, isolation 59

detection 2043

DNA sequencing 1093

fish, contamination, temperature, trop-
ics 963

isolation 2043

verotoxins, production 1949

chromium, reduction, mathematical mod-
els 3653

control

acetic acid, beef, microbial contami-
nation 964

beef

acids, sprays 961

organic acids 1040

foods, disinfectants, p-aminobenzoic
acid 2162

lactic acid, beef, microbial contami-
nation 964

microwave radiation 2142

sodium lactate, beef 135

trisodium phosphate

beef 136

microbial contamination 2149

controls, sausages, lactates 2984

cytotoxins, production 1955

detection 1106, 3899

drinking water

chlorinated, detection, culture media
3192

determination, gene probes 824

identification, culture media 1916

isolation, culture media 1916

effects, *Salmonella typhimurium*, enrich-
ment, detection, immunoassay 3108

Escherichia coli cont.

enterotoxins

production

screening

fish, microbial contamination

942

seafoods, microbial contami-
nation 942

enumeration 1106

enzymes

formate dehydrogenases, production,
reviews 1101

hydrogenases, production, reviews
1101

nitrate reductase, production, genetics,
reviews 1100

epidemiology, reviews 2180

food poisoning, USA 845

foods

contamination 248

detection 879

enumeration 1941

isolation 34

immunomagnetic separation 2846

techniques, recovery 1933

USA 2816

fresh water, sediments, enumeration 1905

gene expression, esterases 786

genetic engineering, phosphorus,
removal, sewage 3753

genetic transformation, esterases 786

genetically engineered microorganisms,
environment, detection, genetics
1141

glucose, fermentation, ethanol production,
kinetics 3379

growth

foods

mathematical models

pH, effects 3103

sodium chloride, effects 3103

temperature, effects 3103

mathematical models 1105

heat resistance, environment 1092

inactivation

electric field, pulsed, foods 3078

foods, electrical treatment, tempera-
ture 874

synergism, water purification, disin-
fection, chloramine, cupric chlo-
ride 1746

inhibition

biocides 2725

by *Bifidobacterium* 1067

isolation

pulsed field electrophoresis 3119

reviews 2180

meat

contamination

South Africa 863

toxins, production, detection,
DNA probes, USA 2918

microbial contamination, determina-
tion, plate count 132

monitoring, reviews, USA 2818

meat products

contamination, South Africa 863

isolation 34

microbial contamination

food, cook-chill system, Malaysia

1945

rivers, Canada 1136

milk, reviews 170

milk products, reviews 170

pentachlorophenol, biodegradation,

pentachlorophenol-4-monoox-
ygenase, gene expression 781

pigmeat, isolation 1889

pigs, carcasses, abattoirs, equipment, con-
tamination, Canada 1025

plasmids, genetic engineering 1791

poultry

carcasses, plucking, equipment, con-
tamination 993

contamination, South Africa 863

monitoring, reviews, USA 2818

poultry meat, quality, monitoring, enu-
meration 149

recovery

effluents, disinfection, ultraviolet
radiation 3044

Escherichia coli *cont.*

- recovery *cont.*
 - selenium, effects 3108
 - surfaces, techniques, comparisons 1090
- resistance, antibiotics, milk products, contamination, Iran 2996
- rivers, isolation 1889
- sea water
 - detection, *beta*-galactosidase, activity 3125
 - pollution, Brazil 2234
- seafoods, contamination, toxins, production, detection, DNA probes, USA 2918
- spoilage, chicken meat, carcasses, cold storage 2909
- sugars, fermentation, ethanol production 2567
- surfaces, enumeration 1941
- survival
 - brackish water, sewage, treatment, stabilization basins, pH 294
 - chicken meat
 - frozen meat, isolation, growing media, comparisons 982
 - irradiation, pH 2985
 - cider, pH 915
 - irradiation+pH 1117
 - mayonnaise
 - storage, temperature 913
 - temperature 1988
 - USA 183
 - melons, storage, temperature 2007
 - mineral waters, microbial contamination 858
 - rivers, water, techniques, monitoring 3148
 - salad dressings, temperature 1988
 - sea water
 - light 274
 - natural light, effects 3153
 - sewage effluent disposal, sea water 1139
 - watermelons, storage, temperature 2007
- techniques, detection, culture media 1857
- thermophilic microorganisms, *beta*-glucosidase, gene cloning 772
- toxins, detection, DNA probes 60
- trichloroethylene, biodegradation, genetic engineering 1441, 2406
- urea, removal, encapsulation 2743
- viability, heat stress, detection, polymerase chain reaction 43
- water
 - detection
 - bioassays, *beta*-glucuronidase 3904
 - gene probes, assays 2720
 - polymerase chain reaction 856
 - disinfection 2161
 - enumeration, culture media 21
- water quality, detection, methodology, assessment 857
- xylose
 - fermentation
 - ethanol production
 - aeration 476
 - kinetics 3379

Essential oils

- Aspergillus flavus*, aflatoxin, production, control 65
- pigmeat, *Aeromonas hydrophila*, control 2047
- wheat
 - contamination, fungi, control 1977
 - storage decay, fungi, control 1978

Esters

- biodegradation
 - fuels
 - additives
 - Acetobacterium woodii*, sediment 1432
 - Eubacterium limosum*, sediment 1432
- methyl esters
 - biodegradation
 - anaerobic conditions
 - Acetobacterium woodii* 2605
 - Eubacterium limosum* 2605

Estuaries

- diatom, blooms, Canada 2229
- faecal coliforms, recovery, culture media, comparisons 18
- microbial contamination, faecal coliforms, techniques, monitoring, mathematical models, USA 1137
- microcosms, filters, microorganisms, fuel oils, biodegradation, Nigeria 3571
- Vibrio vulnificus*, control, bacteriophages, USA 2177

Ethane, biodegradation, anaerobes 2511**Ethanol**

- production, whey, fermentation, *Candida kefir*, aeration 3382
- utilization, acetaldehyde, production, *Hansenula polymorpha* 3380

Ethanol production

- apple juice
 - fermentation
 - Saccharomyces cerevisiae* 3376
 - Zymomonas* 3376
- carobs, pods, fermentation, *Saccharomyces cerevisiae* 1416
- cellobiose, utilization, *Kluyveromyces marxianus* 1466
- cellulose
 - saccharification, *Kluyveromyces marxianus* 3530
 - utilization, *Clostridium thermocellum*, metabolic inhibitors 1409
- cellulosic wastes, biodegradation, USA 2498
- dried fruit, grapes, production, waste water treatment, fermentation, Greece 1408
- food processing, wastes, *Talaromyces emersonii*, *Kluyveromyces marxianus* 3385
- glucose
 - fermentation, *Escherichia coli*, kinetics 3379
 - fructose, fermentation, *Zymomonas mobilis* 3479
- inhibition, molasses, *Saccharomyces*, supplements, control 478
- lactose, fermentation, *Kluyveromyces fragilis*, kinetics 1410
- lignocellulosic wastes, biodegradation, *Aspergillus niger* 3532
- maize cobs, hydrolysates, microorganisms, xylose, enrichment 474
- paddy malt mash, *Saccharomyces cerevisiae* + *Zymomonas mobilis* 469
- plant residues, biodegradation, *Trichoderma reesei* + *Saccharomyces cerevisiae* 2384
- rice straw
 - biodegradation, fungi 2388
 - saccharification, cellobiase+cellulases 1474
- sorghum
 - residues
 - carbohydrates
 - utilization
 - Fusarium oxysporum* 3612
 - Saccharomyces cerevisiae* 3612
- sugar industry, waste water, anaerobic treatment, yeasts, immobilization 721
- sugars, fermentation, *Escherichia coli* 2567
- sweet potatoes, hydrolysis, hydrochloric acid, yeasts, fermentation 3378
- waste paper
 - fermentation 2386
 - saccharification 2386
- wheat, residues, fermentation, yeasts 2387
- whey
 - fermentation, *Kluyveromyces fragilis*, kinetics 1410
 - utilization, *Candida pseudotropicalis*, models, kinetics 473
- xylose
 - fermentation
 - Escherichia coli*
 - aeration 476
 - kinetics 3379

Ethanol production *cont.*

- xylose *cont.*
 - fermentation *cont.*
 - Pichia stipitis*, bioreactors, optimization 549
 - utilization, yeasts, oxygen 516
- Ethene**, removal, wastes, gases, *Mycobacterium* 2516

Ethers

- biodegradation
 - fuels
 - additives
 - Acetobacterium woodii*, sediment 1432
 - Eubacterium limosum*, sediment 1432
- Ethyl esters**, reduction, *Acinetobacter calcoaceticus* 664
- Ethylbenzene**
 - biodegradation
 - groundwater, Australia 3222
 - Mycobacterium vaccae*, soil, metabolites, toxicity 574
 - removal, biofilms+membranes 2445
- Ethylene**, production, carbon dioxide, biodegradation, *Pseudomonas syringae*, gene transfer, *Synechococcus*, gene expression 1786
- Ethylene diaminotetracetic acid**, phosphorus, removal, activated sludge 2636
- Ethylene dichloride**
 - biodegradation
 - waste water
 - biological fixed-film systems, biofilms, thickness, effects 3428
 - bioreactors, design 3416

Ethylhexanoic acid, biodegradation, anaerobes, interactions, mathematical models 2637**EU regulations**

- anaerobic digestion 3812
- composting 3812
- meat products, bacterial count, effects 2061

Eubacteriales, 2,4,6-trichlorophenol, biodegradation, anaerobic digestion 604**Eubacterium**, waste paper, biodegradation, landfills, *Methanobrevibacter*, methane production, interactions 2391**Eubacterium limosum**

- fuels
 - additives
 - alcohols, biodegradation, sediment 1432
 - esters, biodegradation, sediment 1432
 - ethers, biodegradation, sediment 1432
 - ketones, biodegradation, sediment 1432
 - methyl esters, biodegradation, anaerobic conditions 2605

Eubacterium oxidoreducens, gallic acid, biodegradation, anaerobic conditions 496**Europe**

- Campylobacter*, food poisoning 247
- foodborne diseases, trends, reviews 1873
- hazardous wastes, disposal to land 364
- sewage effluent disposal, aquatic environment 3361
- sewage sludge, disposal to land 364
- sludge disposal, books 835
- waste water treatment, books 835
- water pollution, books 835
- water supply, books 835
- waterborne diseases
 - swimming
 - control
 - legislation 280
 - microbiology, standards 280

Eutrophication

- marine areas, coastal water 2791
- phosphorus, sewage, lakes, Northern Ireland 1129
- reservoirs, Czech Republic 1128
- Evaluation**, wetlands, constructed, waste water treatment, mathematical models 1371

Exopolymers, activated sludge, identification, gel filtration chromatography 1856

Experimental design, carbon tetrachloride, biodegradation, microorganisms, USA 511

Expert systems
activated sludge control
nutrients removal
sewage, Germany 671
waste water, Germany 671
microbial flora, microscopy, activated sludge, operation 2326

Explosives
biodegradation, *Clostridium bifermentans* 1590
sediment, bioremediation, composting, USA 2617

Exxon Valdez, oil spills, bioremediation, USA 559

Faecal coliforms
drinking water, pollution, indicator species, France 861
dynamics ponds
pH, effects, Morocco 3169
solar radiation, effects, Morocco 3169
temperature, effects, Morocco 3169
estuaries, recovery, culture media, comparisons 18
inactivation
effluents, seawater, solar radiation 3167
sewage, seawater, solar radiation 3167
sewage effluent, sea water, solar radiation 3168
waste water, disinfection, ultraviolet radiation 3075
indicator species, foods, microbial contamination, Italy 2908
microbial contamination
estuaries, techniques, monitoring, mathematical models, USA 1137
rivers, Canada 1136
removal
sewage
activated sludge, France 331
lagoons, France 331
waste water treatment, biological filtration 1775
rivers, microbial contamination, mathematical models 1127
sewage
enzymes, beta-galactosidase, techniques, determination, colorimetry 3194
recovery, culture media 2872
streams, microbial contamination, mathematical models 1127
surface water, detection, spectrofluorometer 3137
survival, reservoirs, waste water, *Lemna gibba*, effects 3338
swimming pools, microbial contamination 3032
toxins, water, immunodetection, reviews 3189
water
enumeration, culture media 21
recovery, culture media 2872

Faecal flora
contamination, surface water, Barbados, enumeration, comparisons 1860
groundwater, contamination, sewage, France 1167
inactivation, sewage sludge, alkali treatment 1140
monitoring, fresh water, contamination, sewage, Finland 3142
polluted water, detection, immunoassays, monoclonal antibodies 3191

Faeces, coliform bacteria, wells, contamination, water quality 2228

Farm buildings, surfaces, bacteria, dessication, survival 3027

Farms
grain stores, stored products pests, control, pesticides 2932
groundwater
microbial contamination
Canada 2230
USA 2230
threshing, air spora, India 282

Farmyard manure, biodegradation, anaerobic digestion, biogas, production, Czech Republic 1419

Fast food restaurants, waste paper, composting, USA 3297

Fatty acids
Bacillus cereus, spores, inhibition 1033
biodegradation
anaerobic digestion
Methanobacterium formicicum 3600
Methanosarcina mazei 3600
cell growth, inhibition, *Bacillus cereus* 1048
foods, pathogens, control 11
methane production, inhibition 1386
rice, stored products pests, temperature 81
spore germination, inhibition, *Bacillus cereus* 1048
utilization
Nocardia amarae, kinetics 2407
Rhodococcus erythropolis, kinetics 2407
Rhodococcus rhodochrous, kinetics 2407

Fatty acids esters, biodegradation, bacteria, activated sludge 2424

Feathers, biodeterioration, museum specimens, Keratinophilic fungi, India 195

Feed of animal origin, contamination, *Salmonella*, techniques, isolation, Turkey 74

Feeds
Aspergillus ochraceus, identification, polyclonal antibodies 1888
Bacillus cereus, enumeration, standards 1
contamination
aflatoxins, reference materials 899
fungi 1970
Brazil 72
mycotoxins
Africa 62
Asia 62
South America 62
Salmonella
control
heat treatment 73
pressing 73
Germany 69
isolation, comparisons 878
food wastes, utilization, USA 1405
hay, fungi, infection, ammonia treatment, nutritive value 1971
maize, contamination, fumonisins, reviews, USA 896
microbial contamination, reviews, UK 1967
ochratoxin-A, production, *Aspergillus niger* 2927
ponds, sewage, biodegradation, *Lemna gibba*, production 461
poultry
contamination, aflatoxins, detection 71
Salmonella, detection, rapid methods 1968-1969
production
barley straw, biodegradation, *Pleurotus ostreatus*, growth, kinetics 3528
coffee pulp, *Penicillium verrucosum* 1402
Eichhornia crassipes, biodegradation, *Pleurotus ostreatus*, growth, kinetics 3528
maize straw
biodegradation
Lentinus edodes 464
Pleurotus ostreatus 464
mushroom compost, fermentation, *Aspergillus candidus* 3377

Feeds cont.
production cont.
pig slurry, biodegradation, *Musca domestica*, larvae 2375
pig slurry + sorghum, fermentation 2372
poultry manure
fungi, contamination, aflatoxins 70
utilization, *Hermetia illucens* 2688
tomato pomace
hydrolysis
Sporotrichum 462
Trichoderma longibrachiatum 462
wastes, utilization, fermentation, lactic acid bacteria 2374
Salmonella, detection, standards 2
waste paper, utilization, USA 1405

Fermentation
acetates, production, *Acetobacter*, species, characterization 2744
brewery effluent, polysaccharides, production 450
butanediol, production, bacteria, reviews 2473
dried fruit, grapes, production, waste water treatment, ethanol production, Greece 1408
lactic acid bacteria, wastes, utilization, feeds, production 2374
orange juice
chemical composition
Gluconobacter oxydans 1999
Saccharomyces cerevisiae 1999
pig slurry + sorghum, feeds, production 2372
poultry products, processing, wastes, single cell protein, production 1400
sterols
Arthrobacter globiformis, steroids, production 1412
Arthrobacter simplex, steroids, production 1412
Mycobacterium, steroids, production 1412
waste water, molasses, monitoring, methodology 1223
wheat bran, biodegradation, *Aspergillus niger*, mathematical models 544
wheat straw, biodegradation, fungi 3301
xylose, *Pichia stipitis*, ethanol production, bioreactors, optimization 549

Fermented foods
Lactobacillus, bacteriocins, production, pathogens, control, Africa 103
microbial flora, India 924
soyabeans, microbial flora 112

Ferrous sulfate
oxidation
Thiobacillus ferrooxidans
bioreactors, efficiency 2607
reviews 2604

Fertilizer industry, waste water, microorganisms, Nigeria 2577

Fertilizers
hydrocarbons
biodegradation
Pseudomonas oleovorans 1502
Pseudomonas putida 1502
microorganisms, fuel oils, biodegradation, USA 3544

Ferulic acid
biodegradation
Alcaligenes paradoxus 1526
soil, *Nocardia autotrophica* 2748

Fibrobacter succinogenes, xylan, biodegradation, xylanase, production, genes 3534

Ficopomatus enigmaticus, flood control, pumps, fouling, New Zealand 2135

Filamentous microorganisms
inhibition
chlorine 392
hydrogen peroxide 392

Filters
air conditioners, air spora, United Arab Emirates 1026
biological treatment
biofilms, mathematical models, kinetics 3253

Filters *cont.*

- biological treatment *cont.*
 - performance, mathematical models 384
 - upgrading
 - denitrification
 - activated sludge 3740
 - biological fixed-film systems 3740
- composts, gases, volatile compounds, removal, biological treatment 3304
- earthworms, dried fruit, grapes, effluents, anaerobic treatment 3890
- peat, septic tank effluent, biological treatment, pathogens, removal 3308
- sand
 - biological treatment, water purification 3787
 - chlorinated hydrocarbons, biodegradation, polluted soils, bioremediation, trials 3568
 - design, algae, removal, lagoons, waste water treatment, USA 447
 - sorption, drinking water, viruses 2904
 - soil, design, sewage, biological treatment, Germany 1334
 - submerged
 - biological filtration, nitrification, denitrification, microbial flora 3698
 - biological treatment
 - denitrification 1264
 - nitrification 1264
 - phosphorus, removal, sewage 1657
 - water purification, biological treatment, algae, fouling 3785

Filtration

- effluents
 - heavy metals, removal, *Saccharomyces cerevisiae*, uptake 3667
 - microbial contamination, coliform bacteria, control 3165
- surface water, microbial contamination, coliform bacteria, control 3165

Finland

- blood, *Aeromonas*, phenotypes, distribution 2830
- composts, hot water extracts, chemistry 3302
- drinking water, *Aeromonas*, phenotypes, distribution 2830
- foods, *Aeromonas*, phenotypes, distribution 2830
- fresh water, contamination, sewage, faecal flora, monitoring 3142
- human faeces, *Aeromonas*, phenotypes, distribution 2830
- meat, processing, microbial contamination, lactic acid bacteria 2059
- methylmercury, production, lakes, anaerobic conditions, sulfate reducing bacteria 3857
- sewage, bacteriophages, detection, *Escherichia coli* 767
- waste water, biological treatment, chemicals, discharges, inhibition 768
- water distribution
 - heating systems, *Legionella pneumophila*, occurrence 1027
 - pipes, contamination, heterotrophic microorganisms, techniques, determination 2893
- Fischerella*, nuclear power stations, cooling water, heat, utilization, nutrients, removal 2679

Fish

- Aeromonas hydrophila*, beef, contamination, temperature, tropics 963
- antibiotics, resistance 3056
- carcasses, composting 372
- Clostridium botulinum*, bacterial toxins, estimation, ELISA 1951
- cold storage, gram negative bacteria, inhibition, food preservatives, lactic acid bacteria 945
- coliform bacteria, determination, rapid methods 2012
- consumption, food poisoning, dinoflagellata, toxins, French overseas territories 2022

Fish *cont.*

- contamination
 - beef
 - Clostridium perfringens*, temperature, tropics 963
 - Escherichia coli*, temperature, tropics 963
 - Shigella dysenteriae*, control, antibiotics, India 2962
- feeds
 - anaerobic digestion, fluidized beds, volatile fatty acids, production 3805
 - biodegradation, denitrification, anaerobic digestion, fluidized beds, volatile fatty acids 3714
- fish farms, sewage effluent, recycling, microbial contamination, indicator species 3367
- food poisoning, phytotoxins 1878
- lactic acid bacteria, identification 954
- Lactobacillus plantarum*, isolation, bacteriocins, production, pathogens, control 1063
- mackerels
 - spoilage
 - Enterobacter aerogenes*
 - control
 - cloves 2953
 - sodium chloride 2953
- microbial contamination
 - control, gamma radiation 122
 - Escherichia coli*, enterotoxins, production, screening 942
 - modified atmosphere storage, chlorine 121
- packaging, modified atmosphere storage, microbial contamination, control 947
- preservation, propionic acid, yeasts, resistance, isolation 936
- Pseudomonas fluorescens*
 - heat resistance
 - starvation 1079
 - water stress 1079
 - viability
 - starvation 1079
 - water stress 1079
- spoilage, control, *Bifidobacterium*, sodium acetate 2015
- storage, brine, microbial contamination 115
- vacuum packaging
 - histamine
 - synthesis
 - carnobacterium*, keeping quality 953
 - Lactobacillus*, keeping quality 953
 - tyramine
 - synthesis
 - carnobacterium*, keeping quality 953
 - Lactobacillus*, keeping quality 953
- Vibrio vulnificus*, control, heat treatment, pH, thermal radiation 1046

Fish culture, waste water, ammonia, oxidation, *Nitrosococcus* 795

Fish farming

- feeds, biodeterioration, bacteria 900
- fish products, contamination, *Listeria monocytogenes*, Switzerland 944

Fish farms

- biofouling
 - control
 - antifouling agents, Malaysia 3041
 - tributyltin oxide, Malaysia 3041
- salmon, carcasses, composting, aeration 2309
- sewage effluent, recycling, fish, microbial contamination, indicator species 3367

Fish industry, effluents, biological treatment, anaerobic digestion, bacteria, methane, utilization 1761

Fish ponds

- microbial contamination, Nigeria, seasons, effects 9

Fish ponds *cont.*

- sewage
 - biological treatment, Côte d'Ivoire 1398
 - energy, transformation 3365
 - waste water, biological treatment, Côte d'Ivoire 1398
- Fish processing**, fish products, contamination, *Listeria monocytogenes*, Switzerland 944
- Fish products**
 - biodeterioration, fungi, salinity 955
 - Carnobacterium divergens*, bacteriocins, production 2167
 - Carnobacterium piscicola*, bacteriocins, production 2167
 - contamination
 - Listeria monocytogenes*
 - fish farming, Switzerland 944
 - fish processing, Switzerland 944
 - microbial contamination, control, antibacterial agents, protamine 1892
 - spoilage, control, pasteurization, bacteria, heat resistance 2017
- Fish scrap**
 - molasses
 - fermentation
 - lactic acid bacteria 759
 - yeasts 759
 - waste disposal, marine environment, microbial contamination, USA 1397
- Fisheries**, effects, dinoflagellates, toxins, red tides, Brunei 952
- Flavobacterium**
 - aromatic hydrocarbons, biodegradation, soil 3566
 - control, marble, discoloration, biocides, Italy 203
 - copper, mining, bacterial leaching, India 2671
 - copper chrome arsenate, interactions, pentachlorophenol, biodegradation 614
 - 2,4-dichlorophenol, biodegradation 2547
 - enzymes, nylon, manufacture, wastes, biodegradation 3608
 - pentachlorophenol
 - biodegradation 616, 2547
 - copper, toxicity 1523
 - 2,4-dichlorophenol, effects, models 3476
 - enzymes 610
 - glutathione transferase, genetics 591
 - models, kinetics 1560
 - p-cresol, effects, models 3476
 - pentachlorophenol-4-monooxygenase, gene expression 781
 - petroleum, microbial contamination 3008
- Flavobacterium aurantiacum**
 - aflatoxin, biodegradation 66
 - aflatoxins, removal 1964
- Flexibacter canadensis**
 - denitrification, inhibition, oxygen 679
 - nitrite, production, evaluation 3728
- Flocculants**, production, microorganisms 2701
- Flocculation**
 - effluents, microbial contamination, coliform bacteria, control 3165
 - surface water, microbial contamination, coliform bacteria, control 3165
- Flood control**, pumps, fouling, *Ficopomatus enigmaticus*, New Zealand 2135
- Flour mills**
 - machinery
 - contamination
 - arthropods, distribution 2936
 - microorganisms, distribution 2936
- Flours**, wheat flour, citrinin, detection 2926
- Fluidized beds**, anaerobic conditions, waste water, biological treatment, biofilms, growth 3822
- Fluidized beds**
 - activated carbon, biological treatment, landfill leachate, biodegradation 456
 - activated sludge
 - inoculation, biological treatment, phenols, biodegradation 1527
 - waste water treatment 2321

Fluidized beds cont.

- aerobic conditions
- biofilms
 - accumulation
 - sewage, biological treatment 3261
 - waste water, biological treatment 3261
 - cyanide, removal, almonds, seeds, waste water, biological treatment 3687
- amines, biological treatment 2554
- anaerobic conditions
 - abattoirs, waste water treatment 3817
 - biological treatment
 - sewage
 - biofilms, kinetics, mathematical models 1225
 - microbial flora, methane production, population dynamics 1187
- anaerobic digestion
 - fish
 - feeds
 - biodegradation, denitrification, volatile fatty acids 3714
 - volatile fatty acids, production 3805
- anaerobic treatment, waste water, control 1177
- biofilms
 - kinetics 3265
 - sewage, biological treatment 1210
- biological treatment
 - anaerobic conditions, waste water, organic compounds 1227
- denitrification
 - biofilms, mathematical models 1633
 - groundwater 1744
- nitrites, removal, drinking water, Germany 1743
- nitrogen, carbon, removal, sewage, aerobic treatment, anaerobic treatment 1184
- sewage 446, 1183
 - biofilms, activity 1185
 - mathematical models
 - performance 1186
 - Turkey 2282
 - Zoogloea ramigera*, biofilms, mathematical models, substrates, utilization 1805
- waste water
 - mathematical models, Turkey 2282
 - reviews 1182
- bioreactors, waste water treatment, biofilms, dynamics 1175
- coal, solubilization, microorganisms, mathematical models 3798
- groundwater, denitrification, kinetics 2668
- palm oil mill effluent, biological filtration, anaerobic conditions, comparisons 2640
- phenol, biological treatment 2554
- sponges, wire netting, waste water, biological treatment 2316

Fluorene

- biodegradation
 - Pseudomonas*, metabolism 3685
 - Staphylococcus auricularis* 3501

Fodder, storage quality, fungi, aflatoxins, production, poultry 897**Food**

- contamination
 - Campylobacter*, Netherlands 7
 - Salmonella*, Netherlands 7
 - cook-chill system, microbial contamination, pathogens, Malaysia 1945
 - Enterobacteriaceae, identification, polymerase chain reaction 884
 - Gram negative bacteria, isolation, antibacterial agents, comparisons 44
- Listeria*
 - control, ultraviolet radiation, environmental factors, effects 1871
 - identification, polymerase chain reaction 884
 - United Arab Emirates 2189

Food cont.

- Listeria monocytogenes*
 - control
 - reviews 864
 - temperature, mathematical models 245
 - Malaysia 1918
 - microbial contamination
 - control, irradiation, reviews 2143
 - Salmonella*
 - hygiene 850
 - storage 850
 - Spain 2000
 - microorganisms, risk assessment 2821
 - preservation, antiinfective agents, books 2799
 - Staphylococcus aureus*, control, phosphates, metals, inhibition 1044
 - workers, *Listeria*, microbial contamination, hands 1870
 - Yersinia enterocolitica*, isolation, antibacterial agents, comparisons 44
- Food additives**, chickens, carcasses, *Staphylococcus aureus*, control 2070
- Food contamination**
 - germination, kinetics, *Clostridium tyrobutyricum*, mathematical models 2191
 - Salmonella*, identification, probes 2193
- Food handlers**, foodborne diseases, pathogens, reviews, USA 2831
- Food handling**, *Salmonella*, serotypes, isolation, laboratories, Italy 1085
- Food hygiene**
 - chopping boards
 - plastics, microbial contamination, pathogens 837
 - wood, microbial contamination, pathogens 837
 - foodborne diseases, pathogens, reviews, USA 2831
 - fruit, microbial contamination, hospital food service, assessment, Costa Rica 2828
 - ham, processing, assessment, Italy 2829
 - hands, cleaning, microorganisms 839
 - salads, microbial contamination, hospital food service, assessment, Costa Rica 2828
 - skin, cleaning, microorganisms 839
- Food industry**
 - coliform bacteria, identification 2851
 - environmental impact, books 2800
 - food safety, microbial contamination, techniques, control, reviews 1931
 - hygiene, control, sampling 1894
 - Staphylococcus*, identification 2851
- Food inspection**
 - foodborne diseases
 - food microbiology 1877
 - food quality 1877
- Food microbiology**
 - food inspection, foodborne diseases 1877
 - mathematical models, reviews 242
- Food poisoning**
 - Aeromonas*, infectivity 2210
 - bacterial toxins, *Staphylococcus aureus* 889
 - Campylobacter*, Europe 247
 - Clostridium perfringens*, identification, plasmid profiling 2772
 - Escherichia coli*, USA 845
 - fish
 - consumption, dinoflagellida, toxins, French overseas territories 2022
 - phytotoxins 1878
 - prevention, guidelines 6
 - salads, potatoes, *Clostridium botulinum*, USA 2947
 - salted fish, *Clostridium botulinum*, bacterial toxins, Egypt 2013
- seafoods
 - Gracilaria verrucosa*, Japan 2030
- phytotoxins 1878
- shellfish
 - bacterial toxins, detection 893
 - phytotoxins 1878
 - toxins, detection, enzyme immunoassay 2027
- staphylococcaceae, enterotoxins 1950

Food poisoning cont.

- sterilized milk, *Staphylococcus aureus*, enterotoxins 2080

Food preservatives

- Aspergillus parasiticus*, aflatoxins, production, control 64
- bananas, puree, keeping quality 2003
- diacetyl, oysters, *Vibrio vulnificus*, control 2025
- reviews 54
- sorbates, cottage cheese, *Listeria monocytogenes*, survival 2095
- tomato juice
 - bacterial count 98
 - keeping quality 98

Food processing

- waste treatment, reviews 1669
- waste water, biological treatment, wetlands, USA 1670
- wastes
 - composting, Canada 3288
 - ethanol production, *Talaromyces emersonii*, *Kluyveromyces marxianus* 3385

Food production, microbial contamination, health hazards, testing 836**Food quality**, food inspection, foodborne diseases 1877**Food safety**

- assessment, reviews 847
- Bacillus cereus*, spores, sporulation, culture media, temperature, effects 2827
- bibliographies 3911
- foods, microbial contamination, evaluation 1903
- Listeria monocytogenes*, resistance, reviews 4
- microbial contamination
 - control, hazard analysis critical control point 1869
 - food industry, techniques, control, reviews 1931
- Salmonella*, techniques, identification, reviews 2822

Food service, organic wastes, composting, USA 3299**Food spoilage**

- microorganisms, control pressure 266
- Zygosaccharomyces*, identification, polymerase chain reaction 270

Food waste, waste paper, composting, Canada 370**Food wastes**

- agricultural wastes, composting, evaluation, USA 361
- anaerobic digestion, methane, production, Korea Republic 3813
- biological treatment 702
- composting
 - Canada 359
 - economics, USA 366
 - Korea 369
 - Mexico 2299
 - USA 359, 1234, 1251
- domestic gardens, wastes, composting, colleges, USA 362
- paper, wastes, composts 379
- soybeans, *Monascus anka*, α -galactosidase, production 2360
- sugarcane, *Monascus anka*, α -galactosidase, production 2360
- utilization, feeds, USA 1405

Foodborne diseases

- Aeromonas*, infectivity 2210
- Campylobacter*, epidemiology, USA 3101
- Campylobacter jejuni*, reviews 1108
- chicken meat, *Listeria* 2035
- Clostridium botulinum*, reviews, USA 2817
- economics, Croatia 842
- enterobacteriaceae, reviews 844
- food handlers, pathogens, reviews, USA 2831
- food hygiene, pathogens, reviews, USA 2831
- food inspection
 - food microbiology 1877
 - food quality 1877
- hepatitis A virus, reviews 846
- immunopathology, reviews 5

Foodborne diseases cont.

- meat, *Listeria* 2035
- meat products, *Listeria* 2035
- pathogens
 - detection
 - polymerase chain reaction 30
 - reviews 875
 - reviews 843
- Salmonella enteritidis*, isolation, Turkey, techniques, identification, plasmids 14
- trends
 - Europe, reviews 1873
 - North America, reviews 1873
- viruses, epidemiology 1070
- Yersinia enterocolitica* 841

Foods

- Acinetobacter*, characterization 1074
- Aerococcus viridans*, detection, polymerase chain reaction 1935
- Aeromonas*
 - isolation, culture media 869
 - phenotypes, distribution, Finland 2830
 - toxins, production 2917
- Aeromonas hydrophila*
 - growth 250
 - survival, proteinases, production 1887
- afatoxins, Pakistan 1965
- Aspergillus ochraceus*, identification, polyclonal antibodies 1888
- Bacillus*, enumeration, culture media 3100
- Bacillus cereus*
 - enterotoxins, detection 2920
 - enumeration, standards 1
 - isolation, culture media 1895
 - reviews 3118
 - spores, germination, determination 2837
- bacteria
 - detection 1958
 - removal, immunoaffinity columns 2203
- Campylobacter*, isolation 33
- Campylobacter jejuni*, USA 2816
- cheeses, *Clostridium tyrobutyricum*, detection, DNA probes, polymerase chain reaction 253
- Clostridium botulinum*
 - detection
 - bioassays 1853
 - polymerase chain reaction 1853
 - spores, inhibition, caffeic acid 1032
- Clostridium perfringens*, identification, rapid methods 880
- cold storage, *Listeria*, cold injury, viability, detection 1109
- coliform bacteria, detection 879
- composting, design, Australia 1246
- contamination
 - Clostridium botulinum*, detection 38
 - enterotoxins, *Staphylococcus aureus*, detection, ELISA 36
 - Escherichia coli* 248
 - microorganisms, control, magnetic field 55
- mycotoxins
 - Africa 62
 - Asia 62
 - South America 62
- Salmonella*
 - detection 39
 - culture media 2912
 - immunoassay 883
 - isolation, comparisons 878
- emulsions, pathogens, growth analysis 1880
- enterococci, identification 3905
- enterotoxins, *Staphylococcus aureus*, detection, enzyme immunoassay 41
- Escherichia coli*
 - control, disinfectants, p-aminobenzoic acid 2162
 - detection 879
 - enumeration 1941
 - growth
 - mathematical models
 - pH, effects 3103
 - sodium chloride, effects 3103
 - temperature, effects 3103

Foods cont.

- Escherichia coli* cont.
 - inactivation
 - electric field, pulsed 3078
 - electrical treatment, temperature 874
 - isolation 34
 - immunomagnetic separation 2846
 - techniques, recovery 1933
 - USA 2816
- fungi, identification, reviews 2214
- handling, *Listeria monocytogenes*, control, France 2820
- heat treatment, *Clostridium botulinum*, spores, survival 2907
- irradiation, microbial contamination, control, assessment, DNA hybridization 1038
- lactic acid bacteria
 - antibacterial agents, production 232
 - bacteriocins, production, reviews 214
- Listeria*
 - immunoenzyme techniques, determination 867
 - recovery, isolation, culture techniques, inoculation methods 873
- Listeria monocytogenes*
 - control 865
 - disinfectants, p-aminobenzoic acid 2162
 - Mentha piperita*, essential oils 2153
 - pH, lysozyme 1094
 - detection
 - polymerase chain reaction 1935
 - reference materials 1942
 - determination, rapid methods 1938
 - dna amplification, random amplified polymorphic DNA 2882
 - enumeration 2913
 - USA 2816
- maize, contamination, fumonisins, reviews, USA 896
- microbial contamination
 - bacteria, control, tannins 3099
 - Bahrain 2815
 - control 212
 - Bdellovibrio bacteriovorus* 2170
 - irradiation, reviews 1943
 - cooking methods, Japan 1919
 - detection 876
 - faecal coliforms, indicator species, Italy 2908
 - food safety, evaluation 1903
 - moulds 1927
 - pathogens, control, irradiation, reviews 1036
 - reports 826
 - sampling, reviews 32
 - yeasts 1927
- microbial flora, determination 1944
- modified atmosphere storage, carbon dioxide, reviews 1925
- moulds, detection, immunoassay, reviews 1929
- mycotoxins, reviews 1960
- packaging, starch, polyethylene film, degradable, microbial contamination 1924
- pathogens
 - bacteria, sampling, enumeration, reviews 2921
 - control
 - fatty acids 11
 - peptides 2152
 - detection 2871
 - ionizing radiation 218
 - phosphates, antimicrobial properties, models, *Staphylococcus aureus* 1043
- processed products
 - coliform bacteria, enumeration, o-nitrophenol 2850
 - heat treatment, *Clostridium botulinum*, survival, lysozyme, effects 3047
- Saccharomyces cerevisiae*, inactivation, electrical treatment, temperature 874
- Salmonella*
 - control, disinfectants 3062

Foods cont.

- Salmonella* cont.
 - detection 51, 881, 2775
 - antigen antibody reactions 1084
 - assays 1939
 - enzyme immunoassay 42
 - immunodiffusion tests
 - Canada 1934
 - USA 1934
 - peptone 1940
 - reviews 37
 - standards 2
 - Malaysia 1885
 - plate count, culture media, agar 2870
 - recovery, isolation, culture techniques, inoculation methods 873
- Salmonella enteritidis*
 - control
 - disinfectants, p-aminobenzoic acid 2162
 - Mentha piperita*, essential oils 2153
- Salmonella typhimurium*, detection, ELISA 2911
- Shigella*, isolation, culture techniques, DNA probes 1930
- spoilage
 - microorganisms, reviews 2910
- Penicillium*, enumeration, agar, evaluation 3130
- yeasts
 - detection, electrical activity 1928
 - sorbic acids, resistance 1121
- Staphylococcus*, resistance, quaternary ammonium compounds, nucleotide sequences 3110
- Staphylococcus aureus*
 - enterotoxins, production, identification, pulsed field electrophoresis 1898
 - inactivation, electric field, pulsed 3078
- toxigenic fungi, storage, Nigeria 269
- trichothecenes, monitoring 1961
- vacuum packaging
 - Clostridium botulinum*, spores, heat resistance 2209
 - pasteurization, chilling, *Clostridium botulinum*, growth, heat resistance 2141
- viruses, reviews 1072
- wastes
 - composting
 - economic analysis, USA 3278
 - USA 3290
 - water activity, *Zygosaccharomyces rouxii*, isolation, culture media 882
- Yersinia enterocolitica*, detection, polymerase chain reaction 1935

Forest industry, waste water, biological treatment, anaerobes, toxic substances, inhibition 1714**Formaldehyde**

- Cryptosporidium parvum*, survival 2825
- sulfate reducing bacteria
 - control
 - pressure, effects 3052
 - temperature, effects 3052
 - transformation, bacteria 3471

Formate, biodegradation, biofilms, anaerobic conditions, models, kinetics 3538**Formates**

- production
 - Methanobacterium formicicum* 471
 - Methanobacterium thermoformicicum* 471
- utilization
 - methane production
 - Methanobacterium formicicum* 471
 - Methanobacterium thermoformicicum* 471

Fouling, flood control, pumps, *Ficopomatus enigmaticus*, New Zealand 2135**France**

- activated sludge
 - bulking, foaming, techniques, control 1314
 - foaming, *Microthrix* 1316
- foods, handling, *Listeria monocytogenes*, control 2820

France cont.

- groundwater, contamination, sewage, faecal flora 1167
- honey, *Clostridium botulinum*, spores 908
- Mediterranean sea, petroleum hydrocarbons, denitrification, marine sediments 495
- pig slurry, biological treatment, lagoons 2686
- sewage
 - activated sludge, faecal coliforms, removal 331
 - biological filtration, sand 2312
 - biological treatment, biological filtration 1261
 - Escherichia coli*, antibiotics, resistance 331
 - lagoons, faecal coliforms, removal 331
 - sewage effluent, *Escherichia coli*, antibiotics, resistance 331

Freeze drying, *Alcaligenes eutrophus*, phenotypic stability, plasmids, viability 1810**Freeze-drying, *Bacillus subtilis***, spores, survival, genetics 3049**Freeze drying**

- Pseudomonas putida*, phenotypic stability, plasmids, viability 1810
- Staphylococcus aureus*, phenotypic stability, plasmids, viability 1810

French overseas territories, fish, consumption, food poisoning, dinoflagellida, toxins 2022**Fresh water**

- contamination, sewage, faecal flora, monitoring, Finland 3142
- Enterobacteriaceae, biological control, protozoa 1069
- enterovirus, bacteriophages, models, determination 2902
- microcystins, production, cyanobacteria, Canada, bioassays 3095
- sediments

- Escherichia coli*, enumeration 1905
- Salmonella*, enumeration 1905

Fructose, fermentation, glucose, *Zymomonas mobilis*, ethanol production 3479**Fruit**

- microbial contamination, hospital food service, food hygiene, assessment, Costa Rica 2828
- postharvest decay, control, reviews 926
- processing, waste water, anaerobic digestion, bioreactors, kinetics 436
- wastes, anaerobic digestion, mathematical models 3352

Fruit juices

- Averrhoa carambola*
 - preservation
 - sodium benzoate, keeping quality 921
 - sodium bisulfite, keeping quality 921
 - sodium sorbate, keeping quality 921
- Bacillus*, growth, characteristics 1998
- contamination, yeasts, detection, electrical conductivity 2945
- microbial contamination, *Bacillus* 1997
- production, microbial contamination, reviews 1996

Fuel cells, sewage, refuse, composting + aerobic digestion, biogas, production 438**Fuel oils**

- biodegradation
 - microbial flora, nitrogen, effects 2501
 - microorganisms
 - estuaries, microcosms, filters, Nigeria 3571
 - fertilizers, USA 3544
 - polluted soils
 - bioremediation
 - actinomycetales, Arab countries 2502
 - cyanobacteria, Arab countries 2502
 - fungi, Arab countries 2502
- biodegradation, microorganisms, hydrogen sulfide, metabolism 197

Fuel oils cont.

- creosote, wood, biodeterioration, termites, control 188
- oil spills, bioremediation, bioventing, USA 3240
- polluted soils
 - bioremediation 3230
 - Antarctica 3229
- resins, biodegradation, *Pseudomonas* 3545
- storage, caves, soil pollution, heterotrophic microorganisms, aerobes, bioremediation, Germany 1688

Fuels

- additives
 - alcohols
 - biodegradation
 - Acetobacterium woodii*, sediment 1432
 - Eubacterium limosum*, sediment 1432
 - esters
 - biodegradation
 - Acetobacterium woodii*, sediment 1432
 - Eubacterium limosum*, sediment 1432
 - ethers
 - biodegradation
 - Acetobacterium woodii*, sediment 1432
 - Eubacterium limosum*, sediment 1432
 - ketones
 - biodegradation
 - Acetobacterium woodii*, sediment 1432
 - Eubacterium limosum*, sediment 1432
- liquids, production, microorganisms, reviews 3400
- production
 - biomass, conversion, enzymes, books 3914
 - manures 488
 - plant residues 488
 - biodegradation, bacteria, pectate lyase, production 3397
 - sewage sludge 488
 - sugarcane byproducts 488
 - wood residues 488

Fumarate, hydrogenation, bacteria 748**Fungi**

- aflatoxins, production, fodder, storage quality, poultry 897
- ancient monuments, biodeterioration, Spain 2116
- apples, storage decay, biological control + *Bacillus* 2006
- aromatic hydrocarbons, biodegradation 1506
- Aspergillus*
 - Bacillus*, *Trichoderma*, coir, biodegradation, composting 2468
 - growth, tiles, ceilings 3025
- associations, wood borers, isopoda, marine environment, Egypt 3820
- azo compounds, biodegradation, reviews 1598
- bauxite, aluminium, extraction 3796
- biomass, heavy metals, sorption 3665
- biscuits, biodeterioration, Egypt 83
- calcareous rocks, biodeterioration, Mediterranean 2120
- cellulosic wastes, fermentation 2476
- chitinases, techniques, detection 2785
- cigarettes, mycotoxins, Egypt 912
- coffee pulp, caffeine, biodegradation, isolation, characterization 2415
- contamination, aflatoxins, poultry manure, feeds, production 70
- control
 - coconut oil, biodeterioration 2941
 - palm kernel oil, biodeterioration 2941
 - soyabeans, storage decay 82
 - wheat
 - contamination, essential oils 1977
 - storage decay, essential oils 1978

Fungi cont.

- Coriulus versicolor*, pulp mill effluent, decolorization, biological treatment 2659
- cork, contamination, resistance 3000
- distribution, *Calamagrostis arundinacea*, decay, Poland 2100
- dyes
 - biodegradation, reviews 1598
 - triphenylmethane, discoloration, biological treatment 2664
- enzymes, lignin, biodegradation 3880
- feeds
 - contamination 1970
 - Brazil 72
- fish products, biodeterioration, salinity 955
- foods, identification, reviews 2214
- fuel oils, biodegradation, polluted soils, bioremediation, Arab countries 2502
- Fusarium*, chitinase, production 2758
- growth
 - tiles, ceilings 3025
 - wines, corks, identification 1012
- herbicides, biodegradation, soil, tillage 611
- hydrocarbons, biodegradation, marine environment, bioremediation, evaluation 3563
- immobilization, waste water treatment, organic compounds, production 2277
- infection, feeds, hay, ammonia treatment, nutritive value 1971
- insecticides, biodegradation, soil, tillage 611
- isolation
 - cellulose, biodegradation, arid soils, Algeria 1830
 - documentation, biodeterioration, Egypt 3006
 - sewerage, pipes, concrete, microbial corrosion 3018
- kraft mill effluent, decolorization 1698
- lignin, biodegradation, enzymes 2769
- lignocellulose
 - biodegradation
 - single cell protein, production 2480
 - sugars, production 2480
- lignosulfonates, biodegradation 1473
- maize, aflatoxins, production, Nigeria 79
- maize cobs, utilization, amylases, production, cells, immobilization 1479
- melanins, stones, monuments, biodeterioration 2121
- melons, microbial contamination, control 1926
- monuments, biodeterioration 2112
- new species, *Calamagrostis arundinacea*, decay, Poland 2216
- oil refinery wastes, biodegradation, polluted soils, bioremediation, Arab countries 2502
- oilseed cakes, contamination, mycotoxins, production, control 2924
- oilseed plants, contamination, mycotoxins, production, control 2924
- palm kernel meals, biodegradation, enzyme activity 2495
- parchment, biodeterioration 3005
- Penicillium*, growth, tiles, ceilings 3025
- pentachlorophenol, biodegradation, biological fixed-film systems, rotating biological contactors 3575
- phenolic compounds, biodegradation, techniques, detection 3581
- phosphates, solubilization, determination, plate count 818
- polycyclic hydrocarbons
 - detoxification 580
 - metabolism 580
- polymers, biodeterioration, determination, comparisons 1542
- polysaccharides
 - stone, biodeterioration 2113
 - wood, biodeterioration 2113
- polyurethane, foams, biodegradation 2565
- poly(vinyl)chloride, biodeterioration, cryo-electron microscopy 1017

- Fungi cont.**
 properties, activated sludge, Australia 394
 pulp and paper industry, pulps, mineralization, techniques, isolation 1697
 rice straw, biodegradation, ethanol production 2388
 seeds
 aflatoxins
 production
 temperature, melons, Nigeria 898
 water activity, melons, Nigeria 898
 soil fungi, waste water, biological treatment 3755
 spores, germination, orange juice, temperature 2943
 styrene, biodegradation, biological filtration, waste gases 3605
 sunflower meals, biodegradation, enzyme activity 2495
 wall paintings, biodeterioration, reviews 2108
 wheat straw
 biodegradation
 enzymes, evaluation 3526
 fermentation 3301
 mineralization 3513
 xylan, biodegradation, enzymes, screening 814
 xylanases, comparison 808
- Fungi + yeasts**
 nitrification
 in vitro
 ammonium 3721
 urea 3721
- Fungicides**, tetramethylthiuram disulfide, biodegradation, *Pseudomonas aeruginosa*, isolation, soil 627
- Furans**, biodegradation, *Sphingomonas*, biochemical pathways 3455
- Furfural**, biodegradation, bacteria 1707
- Fusarium**
 cereals, fumonisins, production, Spain 1973
 maize, processes foods, fumonisins, Spain 2950
 medium chain fatty acids, biodegradation 2558
 triacylglycerols, biodegradation 2558
- Fusarium moniliforme**, maize, moisture content, fumonisins, production 1975
- Fusarium oxysporum**
 mutants, agricultural wastes, biodegradation, xylanase, production 3515
 sorghum, residues, carbohydrates, utilization, ethanol production 3612
- Galactitol**, biodegradation, D-tagatose, production, *Enterobacter agglomerans* 475
- Galactoglucanannas**
 biodegradation
Aspergillus oryzae, enzymes 538
 mannanases
Bacillus subtilis 533
Trichoderma reesei 533
Schizophillum commune, enzymes 538
Trichoderma longibrachiatum, enzymes 538
- Gallic acid**, biodegradation, *Eubacterium oxidoreducens*, anaerobic conditions 496
- Gallionella**, metals, microbial corrosion, laboratory tests, cultures 1902
- Gallium**, binding, *Pseudomonas fluorescens* 3658
- Gamma radiation**
 beef
 bacterial count 970
 keeping quality 970
 pathogens, control 2977
 fish, microbial contamination, control 122
Listeria monocytogenes, inactivation, beef, temperature, fat, effect 2145
 meat, *Bacillus cereus*, control 222
 poultry meat, *Bacillus cereus*, control 222
 prawns, microbial contamination, control 122
- Gamma radiation cont.**
 seafoods, microbial contamination, control 122
Staphylococcus aureus, inactivation, beef, temperature, fat, effect 2145
 stored products pests, control, grain legumes 2144
 walnuts
 contamination
 coliform bacteria, control 2938
 moulds, control 2938
- Gamma radiation + carbendazim**, onions, storage decay, control 932
- Ganoderma lucidum**
 lignin, biodegradation, phenols, effects 2485
 rare earth elements, sorption 2601
 wheat straw, biodegradation, enzymes, production 2752
- Garlic**, extracts, antifungal properties, tomatoes, moulds, control 2169
- Gases**
 hydrogen sulfide, removal, biological treatment, reviews 2606
 pressure, effects, cattle manure, anaerobic digestion, mathematical models 3347
 sulfur, removal, microorganisms, reviews 3681
 toluene, removal, biological filtration, mathematical models 2503
 volatile compounds, removal, biological treatment, filters, composts 3304
- Gelatin**
Salmonella senftenberg, survival 901
Salmonella typhimurium, survival 901
- Gene expression**
Acinetobacter wolffii, esterases 786
Escherichia coli, esterases 786
 pentachlorophenol
 biodegradation
 pentachlorophenol-4-monooxygenase
Escherichia coli 781
Flavobacterium 781
- Gene location**, enterotoxins, *Staphylococcus aureus*, DNA probes 50
- Genes**
 cloning, xylan, hydrolysis, *Actinomadura*, xylanase 803
 polychlorinated biphenyls, biodegradation, *Rhodococcus globulus* 1533
 xylanase, production, xylan, biodegradation, *Fibrobacter succinogenes* 3534
- Genetic engineering**
 acetates, utilization, methane production, *Clostridium* 1420
 aromatic compounds, biodegradation, *Alcaligenes* 2439
Bacillus cereus, xylanase, production 2726
 benzene, toluene, xylene, mixtures, biodegradation, *Pseudomonas putida* 2504
 chlorobenzoate, biodegradation, *Pseudomonas*, anaerobic conditions 3438
 gene expression, *Bacillus subtilis*, xylanase 1806
 gene transfer, *Bacillus subtilis*, xylanase 1806
 polychlorinated biphenyls
 biodegradation
Pseudomonas 2735
Pseudomonas fluorescens, rhizospheres 3439
 risk assessment, *Saccharomyces cerevisiae*, survival 2779
 toluene, biodegradation, *Pseudomonas*, anaerobic conditions 3438
 trichloroethylene
 biodegradation
Alcaligenes eutrophus 3429
Escherichia coli 1441, 2406
Pseudomonas putida 2406
Trichoderma longibrachiatum, β -glucosidase 810
- Genetic transformation**, *Escherichia coli*, esterases 786
- Genetically engineered microorganisms**
 bacteria, diversity, soil 800
 environment, detection 2777
Escherichia coli, environment, detection, genetics 1141
 release, environmental impact 3202
- Genetically engineered microorganisms**, bacteria, inoculation, soil, reviews 801
- Genetics**
 aromatic hydrocarbons, biodegradation, *Pseudomonas putida* 3556
 biochemical pathways, naphthalene, biodegradation, *Pseudomonas putida* 3564
 biphenyl, biodegradation, *Comamonas testosteroni* 790
 biphenyls, biodegradation, *Alcaligenes eutrophus* 2427
 carbohydrates, catabolism, *Pseudomonas aeruginosa*, enzymes 779
 4-chlorobiphenyl, biodegradation, *Alcaligenes eutrophus* 2427
 cloning
Cellulomonas, cellulase 806
 gene expression
Pseudomonas
 dehalogenase 3839
 dehalogenases 3840
Clostridium botulinum, toxins 1956
 dihydrogen, oxidation, *Azotobacter vinelandii* 2739
 dioxygenase
 3-carboxydiphenyl ether, biodegradation, *Pseudomonas pseudoalcaligenes* 2447
 4-carboxydiphenyl ether, biodegradation, *Pseudomonas pseudoalcaligenes* 2447
 disruption, *Streptomyces lividans*, xylan 802
 DNA, cloning, *Phanerochaete chrysosporium*, glyoxal oxidase 1836
 DNA sequencing
 phenol, biodegradation, *Pseudomonas putida* 2537
Pseudomonas putida, enzymes, catechol, biodegradation 594
Escherichia coli, enzymes, nitrate reductase, production, reviews 1100
 gene amplification, *Pseudomonas*, enzyme activity, aromatic hydrocarbons, biodegradation 2505
 gene expression
Acidiphilium cryptum, antibiotic resistance 3845
 control, *Listeria monocytogenes*, virulence 3096
 evaluation, *Phanerochaete chrysosporium*, lignin peroxidase 3132
 phenol, biodegradation, *Acidiphilium cryptum* 3845
Saccharomyces cerevisiae, *Aspergillus aculeatus* + cellulase 2766
 gene identification, aflatoxin, production 2929
 gene induction, heat shock, *Phanerochaete chrysosporium*, enzymes 3883
 gene mapping
Pseudomonas putida, toluene, biodegradation 3549
Salmonella typhimurium 241
 gene sequencing, *Saccharomyces cerevisiae*, enzymes, production 1828
 gene transfer
Acidiphilium cryptum, antibiotic resistance 3845
 phenol, biodegradation, *Acidiphilium cryptum* 3845
Xanthomonas campestris, whey, utilization, xanthan. gums, production 2378
- genes**
 characterization
 desulfurization, *Rhodococcus* 3829
 dinitrotoluene, biodegradation, *Pseudomonas* 2429

Genetics cont.genes *cont.*characterization *cont.*

hydroxybenzoate, biodegradation,
Pseudomonas putida 774

cloning

aromatic hydrocarbons, desulfurization, *Rhodococcus*, genes, techniques, identification 3570

dinitrotoluene, biodegradation,
Pseudomonas 2429

identification

xylan

biodegradation

xylanase, *Bacillus*
stearothermophilus,
identification 3901

β -xylosidase, *Bacillus*
stearothermophilus,
identification 3901

nucleotide sequences

Pseudomonas putida, dehalogenase 3841

Xanthobacter autotrophicus, dehalogenase 3842

nylon, biodegradation, bacteria 3609

water distribution, pipes, corrosion, bacteria, resistance, copper 3038

genetic analysis

atrazine, biodegradation, *Rhodococcus* 3619

bacteria, polymerase chain reaction + restriction fragment length polymorphism 3900

EPTC, biodegradation, *Rhodococcus* 3619

genetic engineering, *Escherichia coli*, phosphorus, removal, sewage 3753

genetic transformation, sulfates, utilization, *Chlorobium limicola* 1807

4-hydroxybenzoate, biodegradation,
Pseudomonas putida 3413

Listeria monocytogenes 3097

methanol, biodegradation, *Thiosphaera pantotropa* 3635

naphthalene, biodegradation,

Pseudomonas stutzeri, strains, biochemical pathways, comparisons 3555

nitrites, reduction, *Paracoccus denitrificans*, enzymes, nitrite reductases 1796

nucleotide sequences

Bacillus stearothermophilus, xylanase 3844

benzoates, catabolism, *Pseudomonas* 2422

Cellulomonas, cellulase 806

Clostridium botulinum, toxins 1957

foods, *Staphylococcus*, resistance, quaternary ammonium compounds 3110

pediocin, production, *Pediococcus acidilactici* 799

Thermomonospora fusca, xylanase, characterization 3879

pentachlorophenol, biodegradation,
Flavobacterium, glutathione transferase 591

Phanerochaete chrysosporium, cellobiohydrolase 3872

phenolic compounds, biodegradation,
Agrobacterium tumefaciens, biochemical pathways 3595

phylogenetics, *Listeria monocytogenes*, identification, electrophoresis 3114

starch, biodegradation, *Bacterioides thetaiotaomicron* 778

toluene, biodegradation, *Pseudomonas putida* 773

Genetics engineering, plasmids, iron, oxidation, arsenic, resistance, *Thiobacillus ferrooxidans* 3854**Geobacter metallireducens**, magnetite, 4-chloronitrobenzene, reduction 3558**Geotrichum**

distillery effluent, sweet potato, biological treatment 1835

Geotrichum cont.

enzymes, 3-carbonyl butanoate, biodegradation, chemical properties, effects 3486

Geotrichum candidum

biosurfactants

production 3875

characterization 3876

dyes, decolorization, peroxidases 3781

poultry fat, hydrolysis 2681

tallow, hydrolysis 2681

Germany

Bavaria

bottled water

mineral waters, microbial contamination, Enterobacteriaceae 2887

springs (water), microbial contamination, Enterobacteriaceae 2887

sewage, biological treatment, lagoons + rotating biological contactors 1370

acetates, biodegradation, sediment, rivers, organic compounds, inhibition 277

biocides, microorganisms, resistance, epidemiology 3053

biogas

production

meatworks effluent, anaerobic treatment 491

slaughterhouse waste, anaerobic treatment 491

denitrification

sewage

biological filtration, upgrading 1639

reed beds 1623

sewage sludge, dewatering, effluent, activated sludge 2628

domestic gardens, kitchen waste, composting 367

feeds, contamination, *Salmonella* 69

fuel oils, storage, caves, soil pollution, heterotrophic microorganisms, aerobes, bioremediation 1688

horticultural crops, nutrient content, composts, effects 357

nitrites, removal, drinking water, biological treatment, fluidized beds 1743

nitritification, denitrification, control, waste water treatment, computer simulation 339

nutrients

removal

activated sludge, design, upgrading 1294

biological filtration, upgrading 1275

sewage

activated sludge, control, expert systems 671

biological treatment, upgrading 1608

waste water, activated sludge, control, expert systems 671

paprika, microbial contamination, *Salmonella* 1986

pesticides, biodegradation, polluted soils, bioremediation 3242

plant residues, composting 3294

polychlorinated biphenyls

biodegradation

bacteria, genes, rivers, sediment 3199

lakes, sediment, microorganisms 3435

rivers, sediment, microorganisms 3435

refuse, composting 3294

rivers, *Yersinia pseudotuberculosis*, isolation 1910

Salmonella enteritidis, strains, identification 2211

sausages, microbial contamination 148

sewage

biological filtration, upgrading 1274

biological fixed-film systems, anaerobic treatment, aerobic treatment 1192

Germany cont.sewage *cont.*

biological treatment

filters, soil, design 1334

upgrading, bioreactors, submerged 1626

treatment, activated sludge, aeration, basins, design 404

sewage sludge disposal

application to land, reviews 2691

composting, reviews 2691

toxic substances, groundwater, contamination, bioremediation 313

waste water

organic matter, biodegradation, rivers 3362

preliminary treatment, microstraining 1779

synthetic, treatment, biological fixed-film systems 1224

waste water treatment

activated sludge, microbial flora, characterization 400

bioreactors, microbial flora, characterization 400

odour abatement, biological filtration 766

Giardia

cysts, sewage sludge, anaerobic digestion, viruses 1780

toxins, water, immunodetection, reviews 3189

water supply, microbial contamination, Canada 2841

watersheds, contamination, USA 3144

Gibberella fujikuroi, mussels, processing, wastes, gibberellic acid, production 3386

Gibberellic acid, production, mussels, processing, wastes, *Gibberella fujikuroi* 3386

Glass, biomass, formation, drinking water 3019

Gloeophyllum sepiarium

control

timbers

decay

Aspergillus niger 185

Penicillium 185

Trichoderma viride 185

Glucoisosccharinic acid, utilization, kraft mill effluent, anaerobes 3414

Gluconobacter oxydans

glycerol, utilization, dihydroxyacetone, production, enzyme activity, glycerol oxidoreductases 1455

orange juice, chemical composition, fermentation 1999

Gluconolactone, effects, *Clostridium sporogenes*, spores, heat resistance 3109

Glucose

fermentation

Escherichia coli, ethanol production, kinetics 3379

hydrogen, production, *Clostridium*, growth 3531

fructose, fermentation, *Zymomonas mobilis*, ethanol production 3479

utilization, cyanobacteria, excretion, nitrites 3867

Glufoisinate, utilization, environment, Gram negative bacteria 629

Glyceria maxima, meatworks effluent, denitrification, wetlands 1331

Glycerol

production, potato waste, utilization, microorganisms, mathematical models 2385

utilization, *Gluconobacter oxydans*, dihydroxyacetone, production, enzyme activity, glycerol oxidoreductases 1455

Glycerol monolaurate + organic acids, crayfish, *Listeria monocytogenes*, control 1035

Glycerol monolaurin

beef

Clostridium sporogenes, control 966

Listeria monocytogenes, control 966

- Glycerol trinitrate**
biodegradation
Bacillus thuringensis-cereus 3456
Enterobacter agglomerans 3456
- Glycerol monododecanoate, *Bacillus cereus***, spores, inhibition 1033
- Glycine**, biodegradation, anaerobes, metabolism 1800
- Glyphosate**, biodegradation, bacteria, biochemical pathways 3629
- Gold**, uptake, *Chlorella vulgaris*, analysis, x-ray photoelectron spectroscopy 2596
- Gracilaria verrucosa**, seafoods, food poisoning, Japan 2030
- Grain legumes**, stored products pests, control, gamma radiation 2144
- Grain stores**
ecosystems, reviews 76
farms, stored products pests, control, pesticides 2932
- Gram negative bacteria**
air conditioners, dust, monitoring 3111
control, milk, heat treatment 164
dessication, reference materials, microbiology, techniques, determination, stability 3906
2,4-dimethylphenol, biodegradation, freeze drying, survival 775
glufosinate, utilization, environment 629
inhibition, fish, cold storage, food preservatives, lactic acid bacteria 945
isolation, food, antibacterial agents, comparisons 44
organic compounds
biodegradation
biochemistry 2399
marine sediments 2399
surface water, bacterial count 22
tetrachloroethane, biodegradation, isolation 3504
tetracycline, resistance, sediment, marine environment, Scandinavia 3043
Thiosphaera pantotropha, transfer, *Paracoccus denitrificans* 1812
- Gram positive bacteria**
beaches, marine environment, taxonomy 2233
dessication, reference materials, microbiology, techniques, determination, stability 3906
enumeration 2787
- Granular activated carbon**, regeneration, 1,2-dichloroethane, biodegradation, bioreactors, bacteria 1272
- Granules**, anaerobic digestion, sludges, activity 426
- Grape juice, *Penicillium expansum***, patulin 97
- Grape must**
Lactobacillus paracasei subsp. *paracasei*, identification, Portugal 92
Leuconostoc oenos, identification, Portugal 92
- Grass clippings**, composting, USA 3284
- Grass silage**
Listeria monocytogenes
growth 2931
survival 2931
- Greece**
chicken meat, *Listeria*, hospitals 2065
dried fruit, grapes, production, waste water treatment, fermentation, ethanol production 1408
drinking water, bottled, microbial contamination, *Pseudomonas* 26
sausages, microbial flora, characterization 983
water systems, *Legionella pneumophila* 8
- Groundnuts**
aflatoxins, determination 1959
Aspergillus flavus
aflatoxins
Israel 86
production, control, sodium chloride 2939
Aspergillus parasiticus
aflatoxins
control
modified atmosphere storage 909
packaging 909
- Groundnuts cont.**
gypsum, *Aspergillus parasiticus*, aflatoxins, production 87
products
aflatoxins
Aspergillus flavus 910
Aspergillus parasiticus 910
- Groundwater**
aromatic hydrocarbons, bioremediation, bioreactors 1515
bacteriophages
Salmonella, faecal coliforms, detection, assays, interactions, USA, Alabama 19
survival, temperature 3147
biofilms, solutes, transport, mathematical models 279
chlorinated ethenes, biodegradation, bacteria, reviews 3482
chlorinated hydrocarbons, biodegradation, aerobic conditions 2526
chloroform, biodegradation, bioremediation 498
chlorophenols, removal, bioreactors, fluidized beds, biofilms, aerobic treatment 2555
chromium, uptake, bacteria, metabolism 1579
contaminants, desorption, bioremediation, *in situ*, mathematical models 315
contamination
bacteria, transport, porous media 3115
sewage, faecal flora, France 1167
toxic substances, bioremediation, Germany 313
creosote, compounds, interactions, biodegradation, aerobic conditions 3403
denitrification
biological treatment, fluidized beds 1744
bioreactors, biofilms, electrodes, performance 1745
fluidized beds, kinetics 2668
1,2-dichloroethylene, bioremediation 2431
dichloromethane, biodegradation, bioremediation 498
enterovirus, detection 2773
Escherichia coli, bacteriophages, survival, indicator species, viruses, assessment 3146
geological sedimentation, bacteria, transport, models 3850
microbial contamination
farms
Canada 2230
USA 2230
USA 860
nitrates, removal, bacteria, USA 3719
oilfields
iron reducing bacteria, occurrence, Russia 3404
sulfate reducing bacteria, occurrence, Russia 3404
organic compounds, removal, bioremediation 1160
pathogens, transport, mathematical models 1118
petroleum hydrocarbons
biodegradation
Australia 3222
mathematical models 1487
pollutants, removal, bioremediation, mathematical models 3226
pollution
aromatic hydrocarbons, biodegradation, *Mycobacterium vaccae* 3496
bioremediation, reviews 309
organochlorine compounds, biodegradation, *Mycobacterium vaccae* 3496
polycyclic hydrocarbons, biodegradation, *Mycobacterium vaccae* 3496
sewage, *Vibrio cholerae*, India 2227
sulfite reducing bacteria, *Clostridium*, enumeration, comparison 2896
- Groundwater cont.**
tetrachloroethylene, biodegradation, mathematical models, kinetics 2430
toluene, removal, biological treatment, bioreactors, fluidized beds 2527
treatment, trichloroethylene, removal, bioreactors 2426
1,1,1-trichloroethane, biodegradation, bioremediation 498
trichloroethylene, contamination, bioremediation, *Methylosinus trichosporium* 3223
viruses, techniques, detection, DNA probes 2868
waste water
application to land, microbial contamination, indicator species, bacteria, Spain 1123
irrigation, microbial contamination, indicator species, bacteria, Spain 1123
- Growing media**, assessment, *Campylobacter*, oxygen tolerance 2185
- Growth media**, production, coffee industry, wastes, anaerobic digestion 3756
- Gypsum**, groundnuts, *Aspergillus parasiticus*, aflatoxins, production 87
- Hair**, removal, hides and skins, *Bacillus amyloliquifaciens*, enzymes, proteases 2667
- Haloalkones**, biodegradation, *Rhodococcus erythropolis*, enzymes 3434
- Haloanaerobium praevalens**, aromatic compounds, biodegradation, anaerobic digestion 3277
- Halogenated hydrocarbons**
biodegradation
Alcaligenes 1503
bacteria, biochemistry, kinetics 3453
biofilms, microorganisms, kinetics 2395
enzymes 2452
Methylosinus trichosporium 1498
microorganisms, reviews 3432
Pseudomonas 2507
Pseudomonas putida 2458
Rhodococcus rhodochrous, enzymes 518
- Halophilic bacteria**, brine, biological treatment, bioreactors, USA 2278
- Ham**
contamination, *Tyrophagus putrescentiae*, control 972
processing, food hygiene, assessment, Italy 2829
- Hamburgers**, microbial flora, beef, contamination 131
- Hands**
cleaning, microorganisms, food hygiene 839
microbial contamination, control, soaps 1058
washing, hygiene, microbial contamination, assessment 1876
- Hansenula**, sulfonamides, biodegradation 500
- Hansenula polymorpha**, ethanol, utilization, acetaldehyde, production 3380
- Harbours**
sea water, microbial contamination, *Vibrio cholerae*, health risk, USA 3031
sediment, aromatic compounds, biodegradation, USA 1161
- Hard clams**, microbial contamination, control, irradiation, gamma radiation 3064
- Hardboard**, laminated wood, production, waste water treatment, activated sludge, anaerobic treatment, preliminary treatment 1717
- Hardwoods**, pretreatment, biodegradation, *Clostridium thermocellum*, cellulase, kinetics 1470
- Hartmannella vermiformis**, *Legionella pneumophila*, water supply, chlorine, heat treatment, survival 3035
- Hay**, biodegradation, *Thermoactinomyces*, isolation, culture media 1825
- Hazardous wastes**
disposal to land
Europe 364

Hazardous wastes cont.

disposal to land cont.

North America 364

Hazelnuts, contamination, mycotoxins, determination, thin layer chromatography 88**HCH**, biodegradation, triacylglycerol lipase, production, *Pseudomonas* 3622**Health centres**, wastes, *Acinetobacter*, characterization 1074**Health hazards**

composting

Aspergillus fumigatus, mycotoxins 2308

endotoxins 2308

composts, *Aspergillus fumigatus* 3173

food production, microbial contamination, testing 836

meat, microbial contamination, control 2033

poultry

microbial contamination

Campylobacter jejuni 2069*Salmonella* 2069

sea water, microbial contamination,

Maldives 2834

sewage effluent, viruses, control 2843

swimming, sea water, contamination, sewage effluent disposal, South Africa 2833

water

recreational

microbial contamination 2835

water quality, *Salmonella* + indicator species 3139

water supplies, microbial contamination,

Maldives 2834

Heattolerance, *Salmonella enteritidis*, temperature, effects 3123utilization, nuclear power stations, cooling water, nutrients, removal, *Fischerella* 2679**Heat resistance***Bacillus cereus*, spores, germination 2190*Bacillus stearothermophilus*, spores, models 249*Clostridium botulinum*

spores

culture media, lysozyme 2877

sodium lactate 1091

Escherichia coli, environment 1092foods, vacuum packaging, *Clostridium botulinum*, spores 2209*Listeria monocytogenes*, statistical analysis 1115mushrooms, brine, *Clostridium**sporogenes*, spores, determination 2948pineapple juice, *Neosartorya fischeri* 96**Heat shock**, gene induction, *Phanerochaete chrysosporium*, enzymes 3883**Heat stress***Escherichia coli*, viability, detection, polymerase chain reaction 43*Listeria monocytogenes*, viability, detection, polymerase chain reaction 43**Heat treatment***Aeromonas hydrophila*

control

ascorbic acid, effects 3048

sodium chloride, effects 3048

anaerobic conditions, *Staphylococcus aureus*, survival 1039

anaerobic digestion, sewage sludge 3346

canned products, processing, *Clostridium sporogenes*, survival, India 2002enterotoxins, production, *Staphylococcus aureus*, survival 1947

foods

Clostridium botulinum, spores, survival 2907processed products, *Clostridium botulinum*, survival, lysozyme, effects 3047*Listeria monocytogenes*

control

mathematical models 1932

pigmeat, soyabean husks, microbial contamination 3046

injury 2138

Heat treatment cont.

milk

Gram negative bacteria, control 164

Listeria monocytogenes, control 164pigmeat, *Listeria monocytogenes*, survival 140*Saccharomyces cerevisiae*, control,

processed foods, strawberries, contamination 931

skim milk, *Listeria innocua*, inactivation, kinetics 162

wheat straw, utilization, edible fungi, production 1403

Heavy metalsbinding, *Pseudomonas fluorescens* 3658bioaccumulation, *Saccharomyces cerevisiae*, protein, effects 646

biosorption, plants, soil 3672

chromium, activated sludge, inhibition 2323

electroplating waste water, starch,

biodegradation, anaerobes, methane inhibitors 1221

extraction

biomass, decontamination, nitrilotriacetic acid 3657

Pseudomonas fluorescens, decontamination, nitrilotriacetic acid 3657immobilization, refuse, burning, ash, landfills, *Desulfovibrio desulfuricans* 3374

inhibition, phosphates, removal, activated sludge 1297

ions, removal, waste water, microorganisms, sorption 3666

polluted soils, bioremediation, surfactants, microorganisms, production 3651

reduction

microorganisms 3819

Pseudomonas maltophilia 1584

removal

acid mine drainage

aerobic treatment, wetlands, USA 1358

anaerobic treatment, wetlands, USA 1358

activated sludge

cultures, stimulation 3320

selectors, application 1582

aquifers, sand, bacteria, polymers 645

Bacillus subtilis 3660effluents, *Saccharomyces cerevisiae*, uptake, filtration 3667

industrial wastes

biological treatment 1204

yeasts, biomass 2599

polluted soils

bioremediation

Canada 1166

USA 1166

sewage sludge

bacteria 2597

bacterial leaching, *Thiobacillus* 640

sludges, bacterial leaching, bacteria, sulfur, oxidation 2600

soil, macrophytes, bioremediation 3668

waste water, aquatic plants 1844

waste water treatment, artificial wetlands 3670

resistance

aromatic compounds, halogens, biodegradation, *Alcaligenes eutrophus*, characterization 3502

sewage effluent disposal

sea water, coastal areas,

Pseudomonas aeruginosa,

plasmids, Spain 3155

shellfish, coastal areas,

Pseudomonas aeruginosa,

plasmids, Spain 3155

sewage sludge, bacterial leaching, *Thiobacillus* 643soil, removal, *Brassica juncea*, roots, uptake 3220

soil pollution, bioremediation, plants, uptake 2589

sorption

Chlorella fusca, cell walls, cells 1587**Heavy metals cont.**

sorption cont.

fungi, biomass 3665

Saccharomyces cerevisiae 2592*Thiothrix* 2585sulfides, precipitation, *Desulfovibrio* 3656

uptake

Alcaligenes eutrophus, genetic resistance 3827

aquatic plants 1578

Ascomyllum nodosum, alginates, leaching, effects 1574

biomass, fungi, reviews 1570

drainage channels, spoil banks 1581

drugs, production, *Streptomyces* *noursei*, biomass, wastes, mathematical models 1585*Eichhornia crassipes* 3888-3889

rivers, Zimbabwe 2587

Kluyveromyces marxianus 1573*Saccharomyces cerevisiae* 644, 1573,

3650

tannery waste, anaerobic digestion,

algae 1586

water

Hydrilla verticillata 811*Vallisneria spiralis* 811

wood destroying fungi 1575

waste water, biochemical oxygen demand, measurement, biosensors + *Bacillus licheniformis*, efficiency 1149

water

bioremediation, reviews 3655

removal

Brassica juncea, roots 3228*Helianthus annuus*, roots 3228

water pollution, bacteria, pathogens,

India 1917

Helianthus annuus, roots, heavy metals,

water, removal 3228

Helminths

azo compounds, biodegradation, reviews

1598

dyes, biodegradation, reviews 1598

Hemicellulose, biodegradation, *Bacillus*, soil,

termites, infestation 3527

Hemp

pulp, waste water, decolorization, biological treatment, bioreactors,

Phanerochaete chrysosporium 1723

sulfate pulping, waste water, aerobic

treatment + anaerobic treatment

1719

Hepatitis A virus

foodborne diseases, reviews 846

oysters, isolation 948

sewage sludge, detection, polymerase

chain reaction 1144

Herbicides

alachlor, inhibition, cellulose, biodegradation, soil, microbial flora 558

atrazine, biodegradation, microorganisms,

cultures, enrichment 3617

biodegradation

environmental impact, reviews 1555

soil

bacteria, tillage 611

fungi, tillage 611

metolachlor, inhibition, cellulose,

biodegradation, soil, microbial flora

558

simazine

oxidation

products

biodegradation

ozone, pretreatment 2575

ultraviolet radiation, pretreatment 2575

triazine herbicides, biodegradation, water

purification, activated carbon, bacteria, inoculation 3631

Herbs, spices, microbial contamination,

reviews 1985

Hermetia illucens, poultry manure, utilization,

feeds, production 2688

Herrings, pickled foods, bacteria, isolation

2963

Hepatitis A virus, sewage, detection, immunology 2826

- Heterocyclic nitrogen compounds**, biodegradation, sediment, anaerobic conditions 1457
- Heterotrophic microorganisms**
aerobes, fuel oils, storage, caves, soil pollution, bioremediation, Germany 1688
autotrophic microorganisms, competition, waste water treatment, biofilms, mathematical models 1188
biofilms, sewage, reviews 1822
efficiency, sulfur, oxidation, soil 656
kinetics, waste water, biological treatment 1632
nitrification, waste water treatment 3718
nitrifying bacteria, competition, sewage, aerobic treatment, activated sludge, bulking 1287
phenols, biodegradation 1524
waste water treatment, denitrification, nitrite, accumulation 2625
water distribution
pipes
contamination techniques
determination, Finland 2893
monitoring, culture media, Japan 2894
- Hexachlorohexane**
biodegradation
Pseudomonas, soil, enumeration, agar 3902
Pseudomonas puacimibilis, biochemical pathways 3625
- Hexadecane**
biodegradation
Acinetobacter, polluted water, Argentina 565
soil 1163
- Hexamethylenetetramine**, biodegradation, bacteria, methylotrophic 1440
- Hexanoic acid**, reduction, *Acinetobacter calcoaceticus* 664
- Hides and skins**, hair, removal, *Bacillus amyloliquifaciens*, enzymes, proteases 2667
- Higher plants**, sewage, biological treatment, wetlands, constructed 1338
- Histamine**
production
anchovies, bacteria, enzyme activity, Spain 119
cheeses, *Bacillus macerans* 1009
sardines, bacteria, measurement 117
sausages, *Lactobacillus*, pH 1086
synthesis
fish
vacuum packaging
carnobacterium, keeping quality 953
Lactobacillus, keeping quality 953
tuna, canning, quality 941
- Historic buildings**, biodegradation, plants, reviews 2221
- Homoveratric acid**, biodegradation, *Pleurotus eryngii*, laccase, enzyme activity 1469
- Honey**
Clostridium botulinum, spores, France 908
pathogens, control 1884
- Hong Kong**, sewage sludge, coal fly ash, composting, microbial activities 2302
- Horticultural crops**, nutrient content, composts, effects, Germany 357
- Hospital food service**
fruit, microbial contamination, food hygiene, assessment, Costa Rica 2828
salads, microbial contamination, food hygiene, assessment, Costa Rica 2828
- Hospitals**
chicken meat, *Listeria*, Greece 2065
wastes, *Acinetobacter*, characterization 1074
water distribution, pipelines, *Legionella pneumophila*, control, ultraviolet radiation 3036
- Hot water treatment**, pigs, carcasses, decontamination 2052
- Human faeces**
Aeromonas, phenotypes, distribution, Finland 2830
Clostridium botulinum
detection
bioassays 1853
polymerase chain reaction 1853
- Human immunodeficiency virus**, survival, waste water, water 2178
- Humic acids**, effects, DDT, biodegradation, soil, bacteria, growth 628
- Humicola**, xylanases, purification, wood pulp, bleaching 805
- Humicola fuscoatra**, cellulase, activity 1834
- Humicola lanuginosa**, growth effects, starch, biodegradation, amylases, production 3604
- Humidifiers**, *Legionella pneumophila*, Singapore 840
- Humus**, transformation, water purification, bank filtration, microorganisms, growth 1749
- Hungary**
sewage, treatment, upgrading 342
waste water treatment, reviews 1773
water purification, reviews 1773
white sugar, microbial flora 84
- Hydrilla verticillata**, heavy metals, uptake, water 811
- Hydrocarbons**
biodegradation
biofilms, plastics, adhesion, bioreactors 578
fungi, marine environment, bioremediation, evaluation 3563
microorganisms, nitrates, reduction 2529
petrochemical industry, waste water, rotating biological contactors, activated sludge, comparisons 1508
pollutants, microorganisms 2531
polluted soils, bioremediation, models, evaluation 3225
Pseudomonas oleovorans
fertilizers 1502
surfactants 1502
Pseudomonas putida
cytochrome P450 1489
fertilizers 1502
surfactants 1502
polluted soils
bioremediation 3234
methodology, USA, California 320
pollution, bioremediation, books 2793
production
sugarcane bagasse, biodegradation, composts 1477
sulfate reducing bacteria 776
soil, biodegradation, microorganisms 2525
toxicity, polluted soils, soil flora, bioremediation, effects 3237
utilization
Nocardia amarae, kinetics 2407
Rhodococcus erythropolis, kinetics 2407
Rhodococcus rhodochrous, kinetics 2407
- Hydrochloric acid**, culture media, *Listeria monocytogenes*, enzyme activity 1099
- Hydrogen**
oxidation
Thermanaerobacter, thiosulfates 660
Thermanaerobacter, thiosulfite, reduction 3454
polychlorinated biphenyls, biodegradation, sediment 1534
production
algae, energy sources 1589
arabinose, biodegradation, *Clostridium* 1478
aromatic hydrocarbons, biodegradation, *Rhodopseudomonas palustris* 581
cellulose, biodegradation, anaerobes 2492
- Hydrogen cont.**
production cont.
cellulosic wastes, fermentation, *Clostridium* 2478
dairy effluent
utilization
Anacystis 1407
Rhodopseudomonas 1407
glucose, fermentation, *Clostridium*, growth 3531
molasses, biodegradation, *Enterobacter aerogenes* 717
sugar factory waste
utilization
Anacystis 1407
Rhodopseudomonas 1407
xylose
biodegradation, *Clostridium* 1478
fermentation, *Clostridium*, growth 3531
- Hydrogen peroxide**
activated sludge, inhibition 392
filamentous microorganisms, inhibition 392
production, aromatic hydrocarbons, biodegradation, *Pleurotus eryngii*, alcohol oxidoreductases 582
- Hydrogen sulfide**
anaerobic digestion, inhibition, mathematical models 1384
biodegradation
sulfates, production, *Thiobacillus thiooxidans* 650
sulfur, production, *Thiobacillus thiooxidans* 650
emission, control, aeration, waste water, sewerage, Kuwait 3260
metabolism, microorganisms, fuel oils, biodegradation 197
oxidation, oilfields, *Thiobacillus denitrificans*, USA 3838
production, control, sewerage, nitrates 3057
remission, oilfields, reservoirs, sulfate reducing bacteria 726
removal
biogas
Arthospira 483
desulfurization, *Ectothiorhodospira shaposhnikovii* 2609
biological filtration, sulfur, production 3708
gases, biological treatment, reviews 2606
waste gases, industry, biological filtration, composts 1667
waste water, desulfurization, *Ectothiorhodospira shaposhnikovii* 2609
sulfate reducing bacteria, methanogens, interactions, models 2709
- Hydrogenobacter acidophilus**, new species, sulfur, utilization, Japan 2715
- Hydrostatic pressure**, bacterial spores, destruction 31
- Hydroxybenzoate**, biodegradation, *Pseudomonas putida*, genes, characterization 774
- 4-Hydroxybenzoate**, biodegradation, anaerobes, phenols, metabolism 1504
- P-Hydroxybenzoate**, biodegradation, *Moraxella*, enzymes, properties 3447
- 4-Hydroxybenzoate**
biodegradation, *Pseudomonas putida*, genetics 3413
decarboxylation, *Clostridium hydroxybenzoicum*, classification 1811
- 3-Hydroxybutyric acid**, biodegradation, polyhydroxyalkanoic acids, production, *Pseudomonas* 1443
- 2-Hydroxybutyric acid**, production, 1,2-butanediol, biodegradation, *Rhodococcus* 3381
- β -Hydroxypropionic acid**, production, acrylic acid, biodegradation, *Byssochlamys* 466
- Hydroxystearic acid**, production, bacteria, isolation, compost 3831
- Hygiene**
hands, washing, microbial contamination, assessment 1876
spa pools, books 2802

Hyphomicrobium

- dichloromethane, biodegradation, anaerobic conditions 3433
- waste gases, biological filtration, methylene chloride, biodegradation 3307

Hypsizygus marmoreus, lignocellulose, biodegradation, enzyme activity 539**Ibuprofen**, metabolism, *Verticillium lecanii*, stereochemistry, enantiomers 1685**Ice**, water quality, bacteria, determination 2885**Ice cream**

- contamination, *Escherichia coli*, resistance, antibiotics, Iran 2996
- Listeria monocytogenes*, Costa Rica 2097
- microbial contamination, surveys, UK 2839
- production
 - waste water
 - anaerobic digestion 701
 - biological filtration, anaerobic conditions 2315

Pseudomonas aeruginosa, enterotoxins, production 157

- waste water
 - anaerobic treatment, biological filtration 2314
 - biodegradation, anaerobic treatment, bioreactors, kinetics 2645

Iceland, drinking water, *Thermus scotoductus*, new species 1080**Ictalurus punctatus**, fillets, controlled atmosphere storage, microbial contamination 866**Ideonella dechloratans**, new species, chlorates, reduction 1787**Immobilization**

- fungi, waste water treatment, organic compounds, production 2277
- limonin, biodegradation, *Rhodococcus fasciens* 609

Immunopathology, foodborne diseases, reviews 5**India**

- abattoirs, slaughtering equipment, microbial contamination, assessment 2127
- air spora, farms, threshing 282
- Aspergillus*, xylanases, production, characterization 2764
- biogas, production, cattle manure, anaerobic digesters, design, temperature, effects 1762
- cane sugar, waste water, biological treatment, methane production 713
- canned products, processing, *Clostridium sporogenes*, survival, heat treatment 2002
- cattle manure
 - anaerobic digestion, metals, methane production 1390
 - biological treatment, anaerobic digesters, design, biogas, production 2355
- copper
 - mining
 - bacterial leaching
 - Flavobacterium* 2671
 - Pseudomonas* 2671
- cotton waste, anaerobic treatment, methane production 2665
- cyanobacteria, biomass, production, bioreactors 793
- drinking water, coliform bacteria, detection, rapid methods 1915
- egg products, biodeterioration, microbial contamination 2066
- fermented foods, microbial flora 924
- fish, contamination, *Shigella dysenteriae*, control, antibiotics 2962
- groundwater, pollution, sewage, *Vibrio cholerae* 2227
- Himachal Pradesh
 - Serpula lacrimans*
 - dispersal 1120
 - distribution 1120
- Karnataka, onions, storage decay, *Aspergillus niger* 110
- lactic acid bacteria, antimicrobial properties, pathogens, control 229
- latex, rubber, waste water, biological treatment, ponds 2669

India cont.

- paintings, biodeterioration, conservation 194
- Parthenium hysterophorus*, fermentation, methane production 2393
- polluted water, *Entamoeba histolytica*, concentration 2778
- poultry manure
 - anaerobic digestion, metals, methane production 1390
 - biogas, production 3392
- seafoods, contamination, *Shigella dysenteriae*, control, antibiotics 2962
- semolina
 - irradiation
 - bacteria, control, storage life, extension 1037
 - insect pests, control, storage life, extension 1037
 - moulds, control, storage life, extension 1037
- shrimps, microbial contamination, reviews 939
- sulfates, oxidation, thermophilic microorganisms 2610
- timbers, biodeterioration, *Limnoria placuda* 190
- upland areas, wastes, biological treatment, anaerobic digesters, design 2346
- water pollution
 - bacteria, pathogens, heavy metals 1917
 - rivers, techniques, detection, indicator species, *Escherichia coli* 1125
 - whey, anaerobic digestion, metals, methane production 1390
 - zinc, removal, waste water, microbial flora 2586

Indicator species

- bacteria
 - animal wastes, biogas, production, pathogens, removal, Denmark 1760
 - waste water
 - application to land, groundwater, microbial contamination, Spain 1123
 - irrigation, groundwater, microbial contamination, Spain 1123
- ciliates, activated sludge, effluents, quality 1842
- Clostridium perfringens*, marine environment, contamination, sewage disposal, dumping, USA 3360
- diapers, contamination, viruses, survival 3135
- drinking water, pollution, faecal coliforms, France 861
- landfill leachates, contamination, viruses, survival 3135
- mathematical models, rivers, microbial contamination, Canada 1126
- meat production, waste water, biological treatment, lagoons 1145
- microbial contamination, fish, fish farms, sewage effluent, recycling 3367
- pig slurry, application to land, microbial contamination, water 2223
- removal, waste water treatment, ponds, design 3340
- sea water
 - coastal areas, sewage effluent disposal, viruses 3138
 - viruses, survival, temperature, effects 3154
- sediment, viruses, survival, temperature, effects 3154
- sewage, lagoons, biological treatment 1145
- viruses
 - assessment
 - Escherichia coli*
 - bacteriophages
 - survival
 - groundwater 3146
 - waste water 3146

Indicators, microbial contamination, shellfish, books 830**Indicators species**, RNA phages, pathogens, assessment 2860**Industrial sites**, pollution, bioremediation, USA 317**Industrial wastes**

- activated sludge
 - bacteriophages, removal 389
 - coliform bacteria, removal 389
- biological treatment
 - activated sludge, bioreactors, dynamics, time series, data analysis 411
 - anaerobic treatment, bioreactors, sludges, composition, characteristics 3269
 - heavy metals, removal 1204
 - reviews 3249
- cadmium, bioaccumulation, *Streptomyces griseus*, *Streptomyces clavuligerus* 647
- decolorization, Actinomycetales 724
- effluent, pretreatment, biological treatment, reviews 1862
- effluents, activated sludge, bulking, effects 1662
- fluidized bed wastes, utilization, landfills, liners 2366
- heavy metals, removal, yeasts, biomass 2599
- refuse, disposal, legislation, European Communities 454
- sewage, nitrogen, removal, activated sludge, upgrading, Slovenia 1640
- treatment, biotechnology, reviews 693
- vermicomposting, North America 1252
- waste water
 - activated sludge, nitrification, denitrification, mathematical models 1635
 - anaerobic treatment, biological filtration 2314
 - biological treatment, activated sludge, design 2322
 - waste water treatment, sago, bioreactors 2286

Infant foods, microbial contamination, *Citrobacter freundii*, detection 848**Infant formulae**, dried milk, microbial contamination, *Salmonella bovis morbificans*, Italy 2997**Information**

- waste treatment, world, books 3913
- wastes, world, books 3913

Inoculation

- bacteria, polychlorinated biphenyls, biodegradation, enhancement, soil 3498
- silage making
 - pig manure + wheat straw
 - fermentation
 - molasses
 - Lactobacillus plantarum* 760
 - Streptococcus faecalis* 760

Inoculum, bioreactors, anaerobic treatment, biofilms, scanning electron microscopy 1222**Inorganic salts**, waste water, naphthalenesulfonic acid, biodegradation, microorganisms, immobilization, sand 3427**Insect pests**

- Coleoptera, sawmilling, losses 187
- control
 - maize, Cote d'Ivoire 77
 - semolina, irradiation, storage life, extension, India 1037

Insecticides

- biodegradation
 - soil
 - bacteria, tillage 611
 - fungi, tillage 611
 - sulfur, biodegradation, *Saccharomyces cerevisiae* 2573

Insects, rice, stored products pests, fatty acids, temperature 81**Instrumentation**

- probes, monitoring, anaerobic digesters, failure 3178
- screening, sulfate reducing bacteria, control, biocides 2154

Instrumentation *cont.*

waste water, biological treatment, ammonia, measurement 3196

Instruments

medical treatment

microbial contamination, pathogens, biofilms, control, antibiotics, evaluation 3021

pathogens, biofilms, growth, models 3022

Iodine, resistance, water systems,

Pseudomonas cepacia 263

Ionizing radiation, foods, pathogens 218

β -Ionone, biodegradation, *Aspergillus niger* 2423

Ions

removal

waste water

Anabaena doliolum 1605

Chlorella vulgaris 1605

Iran, milk products, contamination, *Escherichia coli*, resistance, antibiotics 2996

Iraq

waste water treatment

activated sludge

efficiency

nitrogen 2325

phosphates 2325

Irish Republic, cheeses, microbial contamination 2093

Iron

bacterial leaching, pyrites, mine spoil, bacteria, cobalt, effects 2670

citrate, complexes, biodegradation, bacteria 3675

enhancement, anaerobic conditions, toluene, biodegradation, sulfate reducing bacteria, USA 3542

ore, bacterial leaching, *Thiobacillus ferrooxidans*, silver, ultraviolet radiation, effects 2591

oxidation

arsenic, resistance, *Thiobacillus ferrooxidans*, genetics engineering, plasmids 3854

bacteria, growth 3837

Thiobacillus ferrooxidans

immobilization, polymers, matrices 3843

kinetics 638

wells, clogging, microorganisms 3033

reduction, *Shewanella putrefaciens* 3659

removal

acid mine drainage, bioreactors 745

drinking water, biological filtration, UK 742

supplements, detection, eggs, *Salmonella enteritidis* 1896

uptake, *Eichhornia crassipes*, rivers, Zimbabwe 2587

viruses, inactivation, surgical instruments 3092

Iron reducing bacteria, occurrence, groundwater, oilfields, Russia 3404

Irpex lacteus, xylan, biodegradation,

xylanases 546

Irradiation

camembert cheese, *Listeria monocytogenes*, survival 181

effluents, microbial contamination, coliform bacteria, control 3165

food, microbial contamination, control, reviews 2143

foods, microbial contamination, control, reviews 1943

gamma radiation, hard clams, microbial contamination, control 3064

Lactobacillus curvatus, control 2136

Listeria monocytogenes, control, chicken meat, contamination 3060

microbial contamination, control, spices, enzyme activity, evaluation 2942

pH, chicken meat, *Escherichia coli*, survival 2985

pulp and paper industry, bleaching, effluents, biodegradation, improvement 733

surface water, microbial contamination, coliform bacteria, control 3165

titanium dioxide, effects, *Pseudomonas stutzeri*, survival 2139

Irradiation+pH, *Escherichia coli*, survival 1117

Irrigation

effluents

sewage, biological treatment, Kuwait, performance 2363

waste water, biological treatment, Kuwait, performance 2363

water reuse, standards 288

vegetables, waste water, waterborne diseases, Chile 3371

waste water

crops, contamination, pathogens, Israel 3368

groundwater, microbial contamination, indicator species, bacteria, Spain 1123

water reuse

septic tank effluent, Israel 2389

waste water treatment, reservoirs, Israel 417

Isopoda

wood borers

marine environment

bacteria, associations, Egypt 3820

fungi, associations, Egypt 3820

Isopropanol, biodegradation, anaerobic digestion, kinetics, mathematical models 1596

Isoquinoline, biodegradation, *Cunninghamella elegans* 1484

Isotiazolone

sulfate reducing bacteria

control

pressure, effects 3052

temperature, effects 3052

Israel

Aspergillus flavus, aflatoxins, groundnuts 86

chemical industry, waste water, biological treatment 1690

crops, contamination, irrigation, waste water, pathogens 3368

drinking water, bacteriophages, monitoring 2898

nitrogen, removal, sewage 3709

petrochemical industry

biological treatment, activated sludge, powdered activated carbon 727

waste water, biological treatment, reviews 1692

phosphorus, removal, sewage 3709

septic tank effluent, water reuse, irrigation 2389

sewage effluent, aquifers, recharge 3389

waste water

biological treatment, ponds, algae 3341

storage, reservoirs, microbial contamination, physico-chemical parameters, effects 3373

waste water treatment, reservoirs, water reuse, irrigation 417

Issatchenkia scutulata* var. *scutulata, alcohols, biodegradation, medium chain fatty acids, production 517

Italy

Venice, wastes, biodegradation, lagoons 281

ancient monuments, biodeterioration, climatic change 2114

bakery products, modified atmosphere packaging, plastic film, *Staphylococcus aureus*, enterotoxins 1983

beef, keeping quality, modified atmosphere storage 2976

bottled water, packaging materials, bacteria, interactions 2886

carrots, processing, microbial flora 2001

cereal products, contamination, fumonisins 904

cream, Enterobacteriaceae, control, disinfectants 2079

food handling, *Salmonella*, serotypes, isolation, laboratories 1085

foods, microbial contamination, faecal coliforms, indicator species 2908

ham, processing, food hygiene, assessment 2829

Italy *cont.*

infant formulae, dried milk, microbial contamination, *Salmonella bovis moribificans* 2997

linear alkylbenzene sulfonate, biodegradation, waste water, biological treatment, activated sludge 2580

maize, contamination, fumonisins 904

meat, contamination, bacteria 2031

meat products, contamination, bacteria 2031

nitrites, reduction, *Pyrobaculum aerophilum*, sea water, boiling 3864

olive oil, production, waste water, biological treatment, bioreactors, aerobic conditions 3761

pasteurized milk, Enterobacteriaceae, control, disinfectants 2079

petroleum hydrocarbons, biodegradation, polluted soils, oil refineries 3569

phosphorus, removal, nitrification + denitrification, activated sludge 3744-3745

polyethylene film, starch, biodegradation, composting 3279

refuse

biodegradation, measurement, methodology 2243

sewage sludge, composting 363

sea water

pollution

mucilages

algae 1131

diatoms 1131

seafoods, microbial contamination, monitoring, control 2964

sewage

activated sludge, bulking, foaming, microorganisms, characteristics 1325

biological treatment, activated sludge, *Aeromonas veronii*, removal 293

stonework, biodeterioration, microorganisms, biofilms, ecology 3015

waste water, disinfection 295

wells, microbial contamination, hepatitis A, waterborne diseases, schools 2836

winemaking, killer yeasts 3128

winemaking residues, activated sludge, efficiency 3330

Jamaica

chicken meat

Pseudomonas

characterization 992

isolation 992

sewage, nutrients, removal, *Eichhornia crassipes* 3887

Japan

bacillariophyta, blooms, marine environment 2231

concrete, microbial corrosion, sewerage 3012

distillery effluent, aerobic treatment, *Aspergillus awamori* 2642

foods, microbial contamination, cooking methods 1919

linear alkylbenzenesulfonates, biodegradation, rivers, biofilms 1569

nitrification, denitrification, sewage, rotating biological contactors, anaerobic treatment, aerobic treatment 2358

nitrogen

biodegradation

nitrous oxide

emission

night soil, biological treatment, aerobic conditions 762

septic tanks, sludges, biological treatment, aerobic conditions 762

removal, waste water, nitrifying bacteria, immobilization, polymers, pellets 3730

organotin compounds, biodegradation, marine sediments 613

Japan cont.

- protease, production, distillery waste-water, *Aspergillus usami* mut. *shirousami* 468
- rivers, *Yersinia pseudotuberculosis*, isolation 1910
- seafoods, food poisoning, *Gracilaria verucosa* 2030
- sewage, biological treatment 1202
- sugar refineries, waste water, anaerobic treatment, biological filtration 719
- sulfur, utilization, *Hydrogenobacter acidophilus*, new species 2715
- toluene diamine, biodegradation, activated sludge 2437
- tri-*n*-butyltin, biodegradation, marine sediments 613
- waste water treatment, decision analysis, microcomputers 448
- water distribution, pipes, contamination, heterotrophic microorganisms, techniques, monitoring, culture media 2894
- water pollution, rivers, reovirus, epidemiology 2225
- wetlands, reed beds, sewage, biological treatment 1335

Jordan

- chickpeas, prepared foods, microbial flora, seasonal variation 100
- nitrification, rivers, mathematical models 1656

Keeping quality

- Averrhoa carambola*
 - fruit juices
 - preservation
 - sodium benzoate 921
 - sodium bisulfite 921
 - sodium sorbate 921
 - bananas, puree, food preservatives 2003
 - beef
 - gamma radiation 970
 - modified atmosphere storage, Italy 2976
 - chicken meat, carcasses, Saudi Arabia 150
 - melons, storage, pretreatment, comparison 1926
 - microbial flora
 - processed cheese
 - Croatia
 - acidity 179
 - pH 179
 - pate, packaging, controlled atmospheres 922
 - poultry
 - carcasses
 - Salmonella typhimurium*, control, disinfectants 1002
 - vacuum packaging, potassium sorbate 2068
 - sausages, microbial flora, storage, temperature 2057
 - tomato juice, food preservatives 98

Keratinophilic fungi

- museum specimens
 - feathers, biodeterioration, India 195
 - leather, biodeterioration, India 195

Kerosene, biodegradation, interactions 633**Ketones**

- biodegradation
 - fuels
 - additives
 - Acetobacterium woodii*, sediment 1432
 - Eubacterium limosum*, sediment 1432
 - polluted soils, bioremediation 530
 - production, mineral oils, biodegradation, polluted soils, microorganisms 1509
 - reduction, bacteria, identification 3423

Killer yeasts, winemaking, Italy 3128**Kitchen waste**, anaerobic digestion, Belgium 3354**Kiwifruits**, storage decay, *Phialophora* 109**Klebsiella**, microbial contamination, enteral feeding, hospitals, homes 15**Klebsiella oxytoca**

- drinking water
 - identification, culture media 1916
 - isolation, culture media 1916

Klebsiella oxytoca cont.

- malonic acid, biodegradation, anaerobic conditions 2397

Klebsiella pneumoniae

- biofilms
 - disinfection
 - chlorine 3066
 - monochloramine 3066
 - thickness, variability, analysis 2706
- survival, mineral waters, microbial contamination 858
- triazines, utilization 2416

Kluyveromyces fragilis

- dairy wastes, biodegradation, bioreactors 709
- lactose, fermentation, ethanol production, kinetics 1410
- orange peel, biodegradation, pectins, characterization 1414
- whey, fermentation, ethanol production, kinetics 1410

Kluyveromyces marxianus

- cellobiose, utilization, ethanol production 1466
- cellulose, saccharification, ethanol production 3530
- food processing, wastes, ethanol production, *Talaromyces emersonii* 3385
- heavy metals, uptake 1573
- whey, utilization, biomass, production 705

Korea, food wastes, composting 369**Korea Republic**

- food wastes, anaerobic digestion, methane, production 3813
- piggery effluent, anaerobic digestion 1769

Kraft mill effluent

- biodegradation
 - Stagospora gigaspora* 1731
 - Trametes versicolor* 1731
- decolorization, fungi 1698
- glucoisosaccharinic acid, utilization, anaerobes 3414
- lignin, biodegradation, *Trametes versicolor*, laccase, isoenzymes 3520
- organochloride compounds, biodegradation, anaerobic digestion 728
- toxicity, biological treatment, *Phanerochaete chrysosporium*, performance 734

Kraft pulp, bleaching, *Trichoderma*

- longibrachiatum*, cellulases 729

Kuehneromyces mutabilis, lignin,

- biodegradation 3517

Kuwait

- broilers, carcasses, abattoirs, processing, microbial contamination 2074
- marine environment, coastal areas, petroleum hydrocarbons, biodegradation, cyanobacteria 1483
- sewage, biological treatment, effluents, irrigation, performance 2363
- waste water
 - biological treatment, effluents, irrigation, performance 2363
 - sewerage, hydrogen sulfide, emission, control, aeration 3260
- waste water treatment, ponds, algae, production 460

Laboratories

- biomedical wastes, steam sterilization 3063
- food handling, *Salmonella*, serotypes, isolation, Italy 1085

Lacobacillus helveticus, growth, soyamilk 3855 **β -Lactams**

- antimicrobial properties
 - Enterobacteriaceae, determination 1050
- Pseudomonas*, determination 1050

Lactate, utilization, *Corynebacterium*

- glutamicum*, growth 2731

Lactates, sausages, pathogens, controls 2984**Lactic acid**

- Campylobacter coli*, control, pigs, carcasses 979
- crayfish, *Listeria monocytogenes*, control, packaging 2026

Lactic acid cont.**meat**

- decontamination, pathogens 1059
- microbial contamination
 - control 2036
 - models 1056
- pigmeat, pathogens, growth, control 2979
- production, cocoa beans, fermentation, bacteria, population dynamics 1984
- Salmonella*, control, pigs, carcasses 979
- utilization, *Clostridium acetobutylicum*, lactate dehydrogenase 3426

Lactic acid bacteria

- antimicrobial properties, pathogens, control, India 229

bacteriocins

- characterization, *Listeria monocytogenes*, control 3087
- production
 - Listeria monocytogenes*, inhibition, fermentation, kimchi 1065

- optimization, culture 886

beers, spoilage, mathematical models 1991

- effects, *Eragrostis tef*, contamination, pathogens, control 2933

fermentation, wastes, utilization, feeds, production 2374**fish**, identification 954**fish scrap**, molasses, fermentation 759

- foods
 - antibacterial agents, production 232
 - bacteriocins, production, reviews 214
 - histidine decarboxylase, genes, detection, polymerase chain reaction 2781
 - inhibition, bacteriocins, production, *Leuconostoc carnosum* 230
 - inoculation, yeasts, control, silage, spoilage 3811
 - meat, processing, microbial contamination, Finland 2059
 - olives, preservation 108
 - plasmids, sausages, spoilage, vacuum packaging 2970
 - screening, silage additives 757
 - seafoods, vacuum packaging, identification 954
 - tomatoes, pulps, quality, organoleptic traits 102
 - vegetables, microbial flora, control 3086

Lactic acid bacteria + Propionibacterium**shermanii**

- maize, silage making, stability 2689

- pearl millet, silage making, stability 2689

Lactobacillus

- cider, microbial contamination, pH, Spain 1990

- fermented foods, bacteriocins, production, pathogens, control, Africa 103

fish

- vacuum packaging
 - histamine, synthesis, keeping quality 953

- tyramine, synthesis, keeping quality 953

- maltose, utilization 3610

- sausages
 - histamine, production, pH 1086

- identification 144

- taxonomy 144

- tyramine, production, pH 1086

- strains, characterization, reviews 46

- sucrose, utilization 3610

Lactobacillus acidophilus

- bacteriocins
 - Bacillus cereus*, inhibition 1061

- Brochothrix thermosphacta*, inhibition 1061

- Clostridium sporogenes*, inhibition 1061

- Listeria monocytogenes*, inhibition 1061

- production, antimicrobial properties, characterization 1061

- Streptococcus faecalis*, inhibition 1061

Lactobacillus brevis, bacteriocins, characterization, antimicrobial properties 56**Lactobacillus bulgaricus**

- growth, soyamilk 3855

Lactobacillus bulgaricus *cont.*

lactose, fermentation, D-lactate, production 1808

Lactobacillus curvatus

control
irradiation 2136
pH 2136
curvatin, amino acid sequences 3081
strains, meat, spoilage, taxonomy 267

Lactobacillus hilgardii, wines, spoilage, monitoring, lactic acid 93**Lactobacillus paracasei**, plant residues, decomposition 2472**Lactobacillus paracasei** *subsp. paracasei*
grape must, identification, Portugal 92
wines, identification, Portugal 92**Lactobacillus plantarum**

bacteriocins, production, characterization 2173
isolation, fish, bacteriocins, production, pathogens, control 1063
plant residues, decomposition 2472
sausages, bacteriocins, production 2172
silage making, pig manure + wheat straw, fermentation, molasses, inoculation 760
survival, olives, preservatives, brine 929

Lactobacillus sake

bacteriocins
characterization, sausages 987
production, techniques, nucleotide sequences 3863

sausage, characterization 244
strains, meat, spoilage, taxonomy 267

Lactococcus lactis, xylose, biodegradation, poly- β -hydroxybutyric acid, production 3522**Lactococcus**

bacteriocins, biological control, meat, vacuum packaging, *Leuconostoc*, spoilage 956
identification, RNA probes 2847

Lactococcus lactis

growth 3849
meat, fermentation, nisin, production 2171

Lactose

biodegradation, *Clostridium*, xylanase, production 2736
fermentation
Aspergillus niger, enzymes, genetic engineering 3766
ethanol production, *Kluyveromyces fragilis*, kinetics 1410
Lactobacillus bulgaricus, D-lactate, production 1808
Saccharomyces cerevisiae, enzymes, genetic engineering 3766

Lagoons

aeration, biological treatment, pulp mill effluent, organic halogen compounds, removal, New Zealand 1704

biological treatment, beet sugar, waste water, Morocco 714
hydraulic residence, sewage, biological treatment, equations, determination 418

meat production
waste water
biological treatment
coliphages 1145
indicator species 1145

nitrification
waste water
algae 1622
bacteria 1622

oil refinery wastes, biological treatment, Singapore 561
performance, sewage, treatment, cold zones, ice, Canada 2341

pig slurry, biological treatment, France 2686

resin acids, biodegradation, pulp mill effluent, New Zealand 1700

sewage
biological treatment
coliphages 1145
indicator species 1145
faecal coliforms, removal, France 331

Lagoons *cont.*

sludges, denitrification, *Rhodobacter sphaeroides*, isolation, characterization 1823

surfactants, biodegradation, waste water treatment, Spain 637

waste water treatment 2340
algae, removal, filters, sand, design, USA 447

wastes, biodegradation, Italy 281
wetlands

constructed, aquatic plants, comparisons, Australia 1341

sewage effluent, biological treatment, Australia 1350

Lagoons + rotating biological contactors,

sewage, biological treatment, Germany 1370

Lakes

Aeromonas, seasonal variation, USA 276
Anabaena flos-squae, seasonal variation, USA 2224

aquatic plants, growth, control, plastics 1122

methylmercury, production, anaerobic conditions, sulfate reducing bacteria, Finland 3857

Microcystis, blooms, Netherlands, control, destratification, mixing 3105
microorganisms, sucralose, biodegradation, catabolism 1438

organic carbon, biodegradation, microbial activities, nitrogen, phosphorus, effects 1124

phosphorus, sewage, eutrophication, Northern Ireland 1129

propanil, biodegradation, bacteria 1564
sediment, polychlorinated biphenyls, biodegradation, microorganisms, Germany 3435

shores, *Microcystis aeruginosa*, crusts, toxins, microcystins, persistence 3117

water supply, bacterial toxins, microcystin, *Microcystis aeruginosa*, Canada 3151

Lamb (meat)

carcasses

microbial contamination
coliform bacteria, enumeration 2056

psychrotrophic bacteria 2055
contamination, Micrococcaceae, identification+statistical analysis 2054

Listeria monocytogenes, growth, modified atmosphere storage, packaging 2982

microbial contamination, pathogens, reviews 2983

microbial flora, physicochemical properties 2980

preparation, microbial contamination, *Pseudomonas*, physicochemical properties 2980

Pseudomonas fluorescens

growth
aerobic conditions 2053
modified atmosphere storage 2053

Pseudomonas fragi

growth
aerobic conditions 2053
modified atmosphere storage 2053

Pseudomonas lundensis

growth
aerobic conditions 2053
modified atmosphere storage 2053

Yersinia enterocolitica, growth, modified atmosphere storage, packaging 2981

Land, contamination, bioremediation 325**Land reclamation**, sewage sludge, composting, UK 368**Landfill leachate**, biodegradation, biological treatment, fluidized beds, activated carbon 456**Landfill leachates**

biological treatment, aquatic plants, wetlands, constructed 1360

bioremediation, bioreactors 3219
contamination, viruses, survival, indicator species 3135

Landfill leachates *cont.*

pollution, environment, biological indicators 1157

Landfills

ammonia, emission, control, biological filtration, USA 2404

environmental management 453

heavy metals, immobilization, refuse, burning, ash, *Desulfovibrio*

desulfuricans 3374
liners, fluidized bed wastes, utilization 2366

nappies, disposal, viruses, persistence 1071

newspapers, biodegradation, bacteria 455
refuse

biodegradation, sewage sludge, soil, covers, enhancement 2696

methane production, assessment, bioassays 2245

settlement, refuse, biodegradation, mathematical models 2365

volatile organic compounds, emission, control, biological filtration, USA 2404

waste paper, biodegradation, *Eubacterium*, *Methanobrevibacter*, methane production, interactions 2391

wastes, cellulose, biodegradation, bacteria, differentiation 3509

Lanthanides, absorption, *Mycobacterium*

smegmatis, biochemistry, kinetics 3690

Laridae

Larus delawarensis

public health

water

microbial contamination
Aeromonas 3227

coliform bacteria 3227

Salmonella 3227

Latex, rubber, waste water, biological treatment, ponds, India 2669**Lead**

removal

aquifers, sand, bacteria, polymers 645
Bacillus subtilis 3660

polluted water, bioremediation, *Eichhornia crassipes* 2588

waste water, aquatic plants 1844

sorption

algae, marine environment 2590
fungi, biomass 3665

heavy metals, *Chlorella fusca*, cell walls, cells 1587

sulfides

oxidation

Thiobacillus ferrooxidans 3686
Thiobacillus thiooxidans 3686

uptake

drainage channels, spoil banks 1581
Eichhornia crassipes, rivers, Zimbabwe 2587

Leaf mould, waste water, chromium, sorption 1571**Leather**, biodegradation, museum specimens, Keratinophilic fungi, India 195**Legionella**

control, cooling towers, biocides, Australia 2158

inhibition, by *Aeromonas* 1062

new species, water, isolation 1110

toxins, water, immunodetection, reviews 3189

water

contamination, isolation 2855
detection, rapid methods 851

water systems

control, ultraviolet radiation 1029
isolation 210

Legionella geestiana, new species, water, isolation 1110**Legionella londiniensis**, new species, water, isolation 1110**Legionella nautarum**, new species, water, isolation 1110**Legionella pneumophila**

binding, characterization 1075

biofilms

drinking water, detection, gas chromatography+mass spectrometry 1906

Legionella pneumophila cont.

- biofilms *cont.*
 - formation, water supply, distribution systems, pipes, materials 3034
- control, ultraviolet radiation, water distribution, pipelines, hospitals 3036
- cooling towers, Singapore 840
- drinking water, contamination, detection, evaluation 2853
- Hartmannella vermiformis*, water supply, chlorine, heat treatment, survival 3035
- humidifiers, Singapore 840
- occurrence, water distribution, heating systems, Finland 1027
- virulence
 - plasmids 260
 - reviews 13
- water, Singapore 840
- water systems, Greece 8

Legionella pneumophila + Acanthamoeba castellanii, detection, DNA amplification, bacteria 1901**Legionella quateirensis**, new species, water, isolation 1110**Legionellae**, environment, samples, recovery, filters, membrane 3122**Legislation**

- European Communities, industrial wastes, disposal, refuse, disposal 454
- wastes, management, USA 2236
- waterborne diseases
 - swimming
 - control
 - Europe 280
 - North America 280

Lemna gibba

- effects, reservoirs, waste water, faecal coliforms, survival 3338
- sewage, biodegradation, feeds, ponds, production 461
- waste water, biological treatment, Morocco 1362
- waste water treatment, ponds, Egypt 2339

Lentinula edodes

- olive oil, production, waste water, biological treatment, phenols, removal 2536
- pentachlorophenol, biodegradation, soil 615

Lentinus edodes (see *Lentinula edodes*)

- maize straw, biodegradation, feeds, production 464

Leptochloa fusca, straw, utilization, thermophilic fungi, cellulase, production 2491**Leptospirillum**, pyrites, mine spoil, iron, bacterial leaching, cobalt, effects 2670**Leptospirillum ferrooxidans**, sulfides, ores, bacterial leaching 744**Lettuces**

- Listeria monocytogenes*
 - control, carrot juice 2156
 - growth 2010
 - survival 935

Leuconostoc

- meat, identification, RNA probes 128
- sausages
 - identification 144
 - DNA-DNA hybridization 981
 - taxonomy 144
- spoilage, meat, vacuum packaging, biological control, *Lactococcus*, bacteriocins 956

Leuconostoc carnosum

- bacteriocins, production, bacteria, inhibition 230
- Listeria*, control, bacteriocins 2175
- meat, bacteriocins, characterization 58

Leuconostoc mesenteroides, control, bacteriocins 215**Leuconostoc oenos**

- grape must, identification, Portugal 92
- wines, identification, Portugal 92

Lichens

- mortar, archaeological material, biodeterioration, Spain 196
- sandstone, ancient monuments, biodeterioration, Spain 2124
- stonework, churches, biodeterioration, Spain 2123

Light

- penetration, algae, effects, ponds, biological treatment 414
- sea water, *Escherichia coli*, survival 274

Lignin

- biodegradation
 - Agaricus bisporus*, peroxidases 3518
 - Bacillus stearothermophilus*, arabinofuranosidase, characterization 3834
 - bacteria, characterization, screening 3535
 - Basidiomycetes, enzymes 3882
 - Bjerkandera*, enzymes 3881
 - Coriopsis polyzona*, enzymes 553
 - Coriolus versicolor*, enzymes 553
 - Criolus versicolor* 3517
 - fungi, enzymes 2769, 3880
 - Ganoderma lucidum*, phenols, effects 2485
 - kraft mill effluent, *Trametes versicolor*, laccase, isoenzymes 3520
 - Kuehneromyces mutabilis* 3517
 - Penicillium citrinum* 2675
 - Phanerochaete chrysosporium*
 - cellobiose hydrogenase 2482
 - enzymes 553
 - reviews 557
 - immobilization
 - lignin peroxidase
 - synthesis
 - air, effects 3519
 - carbon-to-nitrogen ratios, effects 3519
 - lignin peroxidase, activity 3001
 - mutants, enzyme activity 2756
 - proteinases 2763
 - Phellinus igniarius* 3517
 - Pleurotus ostreatus*, enzymes, manganese, effects 3521
 - Pseudomonas* 1468
 - Serratia marcescens* 1467
 - Trametes sanguinea*, laccase, purification 3529
- biodeterioration, sulfate pulping, waste water, wood destroying fungi 2656
- discoloration, sulfate pulping, waste water, *Coriolus versicolor*, gluconolactone, effects 2658
- polymerization, plastics, production, *Trametes versicolor* 1465
- xylose, biodegradation, *Pachysolen tanophilus* 3388

Ligninolytic microorganisms

- Agaricus bisporus* 3518
- Aspergillus* 2488
- Basidiomycetes 3882
- Bjerkandera* 3182, 3881
- Coriopsis polyzona* 553
- Coriolus versicolor* 553, 3517, 3525
- Cucumis sativa* 1832
- fungi 3880
- Ganoderma lucidum* 2752
- Kuehneromyces mutabilis* 3517
- Nocardia autotrophica* 2748
- Oudemansella mucida* 3525
- Paecilomyces* 2488
- Phaenerochaete chrysosporium* 557
- Phanerochaete* 3182
- Phanerochaete chrysosporium* 553, 1463, 1829, 1836, 2751, 2756, 2763, 3519, 3525, 3683, 3883
- Phellinus igniarius* 3517
- Pleurotus eryngii* 1469
- Pleurotus ostreatus* 542, 3521
- Pleurotus sajor caju* 2752
- Pseudomonas* 1468
- Pycnoporus sanguineus* 2752
- Serratia marcescens* 1467, 3535
- Sporotrichum* 2488
- Trametes versicolor* 1465

Lignocellulose

- biodegradation
 - Aspergillus*, isolation 2488
 - Hypsizygus marmoreus*, enzyme activity 539
 - Paecilomyces*, isolation 2488
 - single cell protein, production, fungi 2480
 - Sporotrichum*, isolation 2488

Lignocellulose cont.

- biodegradation *cont.*
 - sugars, production, fungi 2480

Lignocellulosic wastes

- biodegradation
 - biotechnology, reviews 534
 - composting 378
 - ethanol production, *Aspergillus niger* 3532
 - composting, atrazine, biodegradation 3633
 - utilization, enzymes, production, *Thermomyces lanuginosus* 555

Lignosulfonates, biodegradation, fungi 1473**Lime**

- addition
 - pathogens, removal, sewage 2237
 - waste water, biological treatment, upgrading 1194
 - treatment, cotton, straw, biodegradation 1461

Limnoria placauda, timbers, biodeterioration, India 190**Limonia**, biodegradation, *Rhodococcus fasciens*, immobilization 609**Linear alkylbenzene sulfonate**

- biodegradation
 - waste water, biological treatment, activated sludge, Italy 2580
 - waste water treatment, lagoons, Spain 637

Linear alkylbenzenesulfonates, biodegradation, rivers, biofilms, Japan 1569**Lipids**, production, petroleum hydrocarbons, biodegradation, *Pseudomonas aeruginosa* 2379**Lipolytic bacteria**, meat products, techniques, isolation, development 40**Liquid wastes**, biological treatment, activated carbon+biomass, adhesion, evaluation, scanning electron microscopy 2251**Liquids**

- nonaqueous, biodegradation, soil, models 2512
- sulfur, removal, microorganisms, reviews 3681

Listeria

- abattoirs
 - machinery, microbial contamination 2130
 - pigs, carcasses, microbial contamination 2130
- bacteriophages, proteins, nucleotide sequences, isoelectric focusing 1103
- chicken meat
 - foodborne diseases 2035
 - hospitals, Greece 2065
- cold injury, viability, foods, cold storage, detection 1109
- control
 - bacteriocins 215
 - Leuconostoc carnosum*, bacteriocins 2175
 - sponges, antibacterial properties 2137
 - ultraviolet radiation, food, environmental factors, effects 1871
- dairy factories
 - contamination 125
 - detection 2206
- detection
 - biosensors, polymerase chain reaction, products 3893
 - identification, reviews 2788
- food
 - identification, polymerase chain reaction 884
 - United Arab Emirates 2189
 - workers, microbial contamination, hands 1870
- foods, immunoenzyme techniques, determination 867
- identification
 - DNA probes, *Listeria monocytogenes*, genes, listeriolysin, production 2880
 - polymerase chain reaction 2201
 - meat, foodborne diseases 2035
 - meat products, foodborne diseases 2035
 - microbial activities, silage, mathematical models 1972

Listeria *cont.*

- physiology, motility, flagellin, production, differentiation, temperature 2875
- poultry
 - carcasses, South Africa 1003
 - processing, equipment, contamination, South Africa 1003
- recovery, isolation, foods, culture techniques, inoculation methods 873
- samples, environment, immunological techniques, recovery, beads 1850
- sausages, USA 145
- smoked fish 118
- strains
 - characterization 47
 - growth, variation 255
- surface water, contamination 1102
- vegetables, Malaysia 2004

Listeria innocua

- cabbages, modified atmosphere storage, control 2009
- control
 - beef, carcasses, nisin, sprays 967
 - Enterococcus faecalis*, milk, bacteriocins, production 1064
 - Enterococcus faecium*, milk, bacteriocins, production 1064
- differentiation, gene identification 2881
- eggs, detection 1004
- inactivation, skim milk, heat treatment, kinetics 162
- interactions, *Listeria monocytogenes*, detection 2208
- viability, water, detection, temperature 2889

Listeria ivanovii

- detection, polymerase chain reaction, DNA probes 815
- identification, polymerase chain reaction, DNA probes 815

Listeria monocytogenes

- adhesion
 - characteristics, beef, contamination 256
 - polypropylene, surfaces, biological control 3088
 - silica, proteins, sorption, effects 3107
 - stainless steel, surfaces, biological control 3088
 - steel, nutrients, effects 1021
- bacteria, interactions, meat, juices, carbon dioxide enrichment 127
- beef
 - refrigeration
 - potassium sorbate 2091
 - sodium nitrate 2091
- biofilms
 - control
 - stainless steel
 - monolaurin 2163
 - temperature 2163
 - growth, bacteria, interactions 1095
- cheeses, detection 2090
- chicken meat, contamination, techniques, isolation 126

Listeriamonocytogenes, control, *Bacillus* 3080**Listeria monocytogenes**

- control
 - bacteriocins 2167
 - nisin, turkeys, skin, contamination 233
- beef
 - glycerol monolaurin 966
 - sodium gluconate 966
 - sodium lactate 966
- cheeses, carrot juice 2156
- crayfish
 - glycerol monolaurate + organic acids 1035
 - lactic acid, packaging 2026
 - monolaurin, packaging 2026
- Enterococcus faecalis*, milk, bacteriocins, production 1064
- Enterococcus faecium*
 - control of 1066
 - milk, bacteriocins, production 1064
- food
 - reviews 864

Listeria monocytogenes *cont.*

- control *cont.*
 - food *cont.*
 - temperature, mathematical models 245
- foods 865
 - disinfectants, p-aminobenzoic acid 2162
 - handling, France 2820
 - Mentha piperita*, essential oils 2153
 - pH, lysozyme 1094
- heat treatment
 - mathematical models 1932
 - pigmeat, soyabean husks, microbial contamination 3046
- irradiation, chicken meat, contamination 3060
- lactic acid bacteria, bacteriocins, characterization 3087
- lettuces, carrot juice 2156
- macrophages, bactericidal properties, nitrite, effects 2840
- milk, heat treatment 164
- nisin, effects, temperature 3082
- pigmeat, nisin, modified atmosphere storage 138
- sausages
 - carrot juice 2156
 - Staphylococcus xylosum*, antimicrobial activity 988
- smoked fish, storage, sodium chloride, packaging 2960
- smoked salmon
 - storage
 - sodium lactate 1041
 - sodium nitrite, sodium chloride 1042
 - sodium lactate, beef 135
 - sous-vide treatment, chicken meat, contamination 3060

Listeriamonocytogenes, control, *Sporolactobacillus* 3080**Listeria monocytogenes**

- control
 - Streptococcus thermophilus*, bacteriocins, production 3084
 - trisodium phosphate, beef, microbial contamination 2149
- controls, sausages, lactates 2984
- detection, *Listeria innocua*, interactions 2208
- determination, polymerase chain reaction 2883
- differentiation, gene identification 2881
- disinfection, surfactants, efficiency 1054
- eggs, detection 1004
- enzyme activity
 - culture media
 - acetic acid 1099
 - hydrochloric acid 1099
- epidemiology, electrophoresis, Denmark 2842
- fish products
 - contamination
 - fish farming, Switzerland 944
 - fish processing, Switzerland 944
- food
 - Malaysia 1918
 - workers, microbial contamination, hands 1870
- foods
 - detection
 - polymerase chain reaction 1935
 - reference materials 1942
 - determination, rapid methods 1938
 - dna amplification, random amplified polymorphic DNA 2882
 - enumeration 2913
 - USA 2816
- genes
 - characterization 3112
 - listeriolysin, production, identification, DNA probes, *Listeria* 2880
- genetics 3097
- growth
 - beef
 - modified atmosphere storage 960
 - vacuum packaging 960, 2974
 - culture media 3124
 - grass silage 2931

Listeria monocytogenes *cont.*

- growth *cont.*
 - inhibition, pigmeat, modified atmosphere storage+nisin 973
 - lamb (meat), modified atmosphere storage, packaging 2982
 - lettuces 2010
 - meat 1920
 - models 23
 - seafoods 1920
 - survival
 - lettuces 935
 - salads 935
- heat injury, milk, techniques, recovery 1890
- heat resistance, statistical analysis 1115
- heat tolerance, temperature, mathematical models 1932
- ice cream, Costa Rica 2097
- identification 2914
 - DNA amplification 1078
 - electrophoresis, genetics, phylogenetics 3114
 - polymerase chain reaction 2195
- inactivation
 - gamma radiation, beef, temperature, fat, effect 2145
 - kinetics
 - citric acid 1047
 - pH 1047
 - mathematical models 239
 - pressure 2146
- inhibition
 - bacteriocins
 - production
 - lactic acid bacteria, fermentation, kimchi 1065
 - Leuconostoc carnosum* 230
 - beef, packaging, controlled atmosphere, carbon dioxide 962
 - cheeses, production, nisin 2089
 - eggs, waste water, mathematical models 999
 - Lactobacillus acidophilus*, bacteriocins 1061
 - protamines 1034
 - Rosmarinus officinalis*, production, antibacterial agents 231
 - turkey meat, additives 1000
- injury
 - chlorine 2138
 - heat treatment 2138
- listeriolysin, expression, arbutin, repression 258
- low fat cheese 180
- meat
 - isolation 958
 - microbial contamination, China 130
 - microbial flora, interactions 957
 - monitoring, reviews, USA 2818
- meat products
 - contamination, techniques, isolation 126
 - control, organic acids 1049
 - detection, culture media 870
 - microbial contamination, China 130
 - metals, detection, polymerase chain reaction 1904
- microbial contamination, food, cook-chill system, Malaysia 1945
- milk
 - contamination, detection, polymerase chain reaction 16
 - enumeration, mathematical models 2085
 - reviews 171
 - mutants, bacteriocins, resistance 261
 - nisin, resistance 2207
 - pathogenicity, genetics 12
 - pigmeat
 - contamination, detection, polymerase chain reaction 16
 - heat treatment, survival 140
 - storage, survival 140
 - pigs, carcasses, Trinidad and Tobago 2051
 - poultry, monitoring, reviews, USA 2818
 - preservation, silica gel 2819
 - pressure, effects, electron microscopy 3098
 - recovery, culture media, evaluation 2204

Listeria monocytogenes cont.

- resistance, food safety, reviews 4
 - salmon, processing, microbial contamination, Norway 2954
 - sausages
 - Canada 146
 - contamination, techniques, isolation 126
 - refrigeration
 - potassium sorbate 2091
 - sodium nitrate 2091
 - seafoods
 - contamination
 - England 2028
 - Wales 2028
 - reviews 2016
 - serotypes, identification, randomly amplified polymeric DNA fingerprinting 854
 - smoked fish, microbial contamination 2956
 - soft cheese, Costa Rica 2097
 - stainless steel, biofilms, formation, nutrients 2111
 - superoxide dismutase 3113
 - survival
 - beef, pasteurization 968
 - camembert cheese, irradiation 181
 - controlled atmospheres, oxygen, models 3104
 - grass silage 2931
 - meat products
 - nitrites 980
 - pH 980
 - pigmeat, modified atmosphere storage 2049
 - rubber 2109
 - silage, oxygen, monitoring 3810
 - stainless steel 2109
 - turkey meat, modified atmosphere storage 2073
 - toxins
 - production
 - cysteine + potassium sorbate 1954
 - organic compounds 2916
 - turkeys, feathers, removal, microbial contamination 2075
 - vegetable juices
 - carrots
 - antimicrobial properties
 - pH 1031
 - sodium chloride 1031
 - temperature 1031
 - viability
 - detection, tetrazolium dyes, comparisons 849
 - heat stress, detection, polymerase chain reaction 43
 - virulence
 - gene expression, control 3096
 - sodium chloride 1083
- Listeriolysin**, expression, *Listeria monocytogenes*, arbutin, repression 258
- Litter**, poultry manure, composting 2301
- Low fat cheese**
Listeria monocytogenes 180
Salmonella 180
- Low temperature storage**, buffalo meat, radiation, microbial flora, control 220
- Lubricant**, biodegradation, *Micrococcus roseus*, esterases 3691
- Lubricants**, biodegradation, test procedure, assessment 1485, 1546
- Lycophyllum shimeji**, soyabeans, wastes, biomass production 2373
- Machinery**
abattoirs
 - microbial contamination
 - Aeromonas* 2130
 - Listeria* 2130
 - Yersinia* 2130
- Mackerels**, packaging, controlled atmosphere storage, pathogens, control 114
- Macrophages**, bactericidal properties, *Listeria monocytogenes*, control, nitrite, effects 2840
- Macrophytes**, heavy metals, removal, soil, bioremediation 3668
- Macruronus novaezelandiae**, spoilage, bacterial count, New Zealand 2968

Magnetic field, foods, contamination, microorganisms, control 55

Maize

- aflatoxins, determination 1959
 - Aspergillus flavus*, aflatoxins, production, control, plant oils 63
 - contamination
 - aflatoxins 80
 - fumonisin, Italy 904
 - zearealenone 80
 - food grains
 - biodeterioration
 - Aspergillus clavatus* 902
 - Aspergillus nidulans* 902
 - fumonisin
 - detection 895
 - determination, liquid chromatography 78
 - heat stability, determination 2930
 - fungi, aflatoxins, production, Nigeria 79
 - fusarochromanone, detection, liquid chromatography 75
 - insect pests, control, Cote d'Ivoire 77
 - kernels, *Aspergillus flavus*, aflatoxins, production 1974
 - moisture content, *Fusarium moniliforme*, fumonisin, production 1975
 - processes foods, *Fusarium*, fumonisin, Spain 2950
 - processing, waste water, biological treatment, anaerobic digesters, design, bacteria, granules 1663
 - silage making, stability, lactic acid bacteria + *Propionibacterium shermanii* 2689
 - storage, microbial contamination, *Aspergillus*, aflatoxins, Brazil 2934
- Maize bran**, biodegradation, anaerobic digestion, rumen microorganisms, methane production 2471
- Maize byproducts**, pullulan, production, *Aureobasidium* 2382
- Maize cobs**
 - hydrolysates, ethanol production, microorganisms, xylose, enrichment 474
 - pretreatment, sodium hydroxide, cellulose, biodegradation, bacteria, single cell protein, production 3511
- utilization
 - amylases, production, fungi, cells, immobilization 1479
 - enzymes, production, *Thermomyces lanuginosus* 555
- Maize stover**, biodegradation, *Pleurotus ostreatus* 532
- Maize straw**
 - biodegradation
 - Lentinus edodes*, feeds, production 464
 - Pleurotus ostreatus*, feeds, production 464

Malaysia

- Penang
 - fish farms
 - biofouling
 - antifouling agents 3041
 - tributyltin oxide 3041
- food
 - cook-chill system, microbial contamination, pathogens 1945
 - Listeria monocytogenes* 1918
- foods, *Salmonella* 1885
- marine borers, distribution, mangrove swamps 1014
- shrimps, microbial contamination, reviews 939
- vegetables, *Listeria* 2004

Malbranchea pulchella var. *sulfurea*, enzymes, xylose, biodegradation 809

Maldives

- sea water, microbial contamination, health hazards 2834
 - water supplies, microbial contamination, health hazards 2834
- Maleic acid**, biodegradation, D-maleic acid, production, *Ustilago sphaerogena* 1413
- D-maleic acid**, production, maleic acid, biodegradation, *Ustilago sphaerogena* 1413

Malonic acid, biodegradation, anaerobic conditions, bacteria 2397

Maltose, utilization, *Lactobacillus* 3610

Management

- sewage sludge
 - disposal to land
 - UK 452
 - USA 452
 - sludges
 - disposal to land
 - UK 452
 - USA 452
- Manganese**
 - reduction, *Shewanella putrefaciens* 3659
 - removal
 - drinking water
 - biological filtration
 - sand, nitrates, effects 741
- Mangoes**
 - processed products, microbial contamination, coliform bacteria, Australia 2949
 - wastes + rice straw, *Pleurotus ostreatus*, growth 2367
- Mangrove swamps**
 - marine borers, distribution, Malaysia 1014
 - nutrients, recycling, bacteria, tropics 1610
- Manures**
 - biogas, production 488
 - composting
 - biogas, production 750
 - plastic tunnels, odour abatement 1258
 - USA 1235
 - fuels, production 488
- Marble**, discoloration, microorganisms, control, biocides, Italy 203
- Marine areas**
 - coastal water, eutrophication 2791
 - polluted water, *Aeromonas*, distribution, Spain 265
 - water quality, shellfish, production, USA 1130
- Marine borers**
 - distribution, mangrove swamps, Malaysia 1014
 - wood borers, *Xylophaga atlantica* 2107
- Marine environment**
Alexandrium
toxins
 - production
 - Canada, biogeography 2222
 - USA, biogeography 2222
- bacillariophyta, blooms, Japan 2231
- beaches, Gram positive bacteria, taxonomy 2233
- coastal areas
 - Kuwait, petroleum hydrocarbons, biodegradation, cyanobacteria 1483
 - microbial contamination, United Arab Emirates 1138
 - sewage effluent disposal, microbial contamination, mathematical models 1135
- contamination, sewage disposal, dumping, *Clostridium perfringens*, indicator species, USA 3360
- hydrocarbons, biodegradation, fungi, bioremediation, evaluation 3563
- lead, sorption, algae 2590
- microbial contamination, fish scrap, waste disposal, USA 1397
- nickel, sorption, algae 2590
- oil spills, bioremediation 3214
- oilfields, equipment, corrosion, sulfate reducing bacteria 199
- organic nitrogen compounds, algae, blooms 2232
- sediment
 - Gram negative bacteria, tetracycline, resistance, Scandinavia 3043
 - 2,4,6-tribromophenol, biodegradation, bacteria 3594
- viruses, identification, DNA probes 235
- wood borers
 - isopoda
 - bacteria, associations, Egypt 3820
 - fungi, associations, Egypt 3820

Marine fishes, spoilage, bacteria 2023**Marine fouling**

Balanus amphitrite, larvae, settlement, bacteria, bacteriocins, ubiquinones, control 2176

Navicula subinflata, polysaccharides, production, chemistry 3042

Marine sediments

petroleum hydrocarbons, denitrification, France, Mediterranean sea 495

phenanthrene

biodegradation

Trichosporon penicillatum, USA 2510

yeasts, USA 2510

polycyclic hydrocarbons

biodegradation

Trichosporon penicillatum, USA 2510

yeasts, USA 2510

Marshes

organic sulfur compounds, biodegradation, *Rhodospirillum rubrum*, *Sulfidobacterium* 3506

sewage, biological treatment, USA 420

Mathematical models

abattoirs, waste water treatment, anaerobic digestion, kinetics 3818

activated sludge 3309

bioreactors 3322

bulking

aerobic conditions 1290

control, UK 2328

control, respirometry 408

dynamics 2334

sewage, treatment 1289

microorganisms, death 787

performance, control, dynamics 2327

respiration 3323-3324

scum, formation, Actinomycetales

1321

upgrading, aeration, tanks, design 405

variation, plant design 406

air, contamination, organic compounds, removal, biological treatment 2235

algae, biofilms 2771

anaerobic digestion

inhibition

ammonia 1384

hydrogen sulfide 1384

animal manures, anaerobic digestion, efficiency 1759

bacterial leaching, reviews 2677

beers

spoilage

lactic acid bacteria 1991

Pectinatus frisingensis, volatile

fatty acids, production 1995

volatile fatty acids, production,

Pectinatus frisingensis 920

benzene, biodegradation, porous media, microbial activities, kinetics 2700

biological fixed-film systems

anaerobic treatment 3272

biofilms, formation 1180

carbon tetrachloride, biodegradation, microorganisms 663

cattle manure, anaerobic digestion, gases, pressure, effects 3347

chemicals

biodegradation

aerobic treatment 304

assessment 2244

kinetics 2246

chromium, reduction, *Escherichia coli* 3653

Clostridium botulinum, growth 1104

Clostridium tyrobutyricum, food contamination, germination, kinetics 2191

coal, solubilization, microorganisms, fluidized beds 3798

colloids

biodegradation

biological filtration 1395

rotating biological contactors

1395

contaminants, desorption, groundwater, bioremediation, *in situ* 315

denitrification

activated sludge, nitrous oxide, production 3736

Mathematical models cont.

denitrification cont.

biofilms, biological treatment, fluidized beds 1633

dynamics, bioreactors 2623

waste water, enzyme activity 3735

1,2-dichloroethene, waste water, biodegradation, bioreactors, membranes 3411

drinking water

denitrification 680

biofilms, adhesion, electrodes 676

drugs, production, *Streptomyces noursei*, biomass, wastes, heavy metals, uptake 1585

dynamic models

activated sludge 1327

denitrification, sewage, activated

sludge, temperature 685

nitrification, sewage, activated sludge, temperature 685

dynamics, activated sludge, aeration, temperature 3319

Escherichia coli, growth 1105

ethylhexanoic acid, biodegradation,

anaerobes, interactions 2637

filters, biological treatment, performance 384

food, *Listeria monocytogenes*, control, temperature 245

food microbiology, reviews 242

foods

Escherichia coli

growth

pH, effects 3103

sodium chloride, effects 3103

temperature, effects 3103

fruit, wastes, anaerobic digestion 3352

gases, toluene, removal, biological filtration 2503

groundwater, pollutants, removal, bioremediation 3226

indicator species, rivers, microbial contamination, Canada 1126

industrial wastes, waste water, activated sludge, nitrification, denitrification 1635

isopropanol, biodegradation, anaerobic digestion, kinetics 1596

kinetics

Bacillus stearothermophilus, control, heat treatment 877

biomass, phenolic compounds, caffeic acid, biodegradation, olive oil,

production, waste water 2533

domestic gardens, wastes, composting 353

filters, biological treatment, biofilms 3253

phenolic compounds, biodegradation, activated sludge, microbial flora,

growth 1529

phenols, biodegradation, activated sludge, microbial flora, growth 1529

sewage, biological treatment, ponds 422

tetrachloroethylene, biodegradation, groundwater 2430

waste water, biological treatment, ponds 422

Listeria monocytogenes

control, heat treatment 1932

heat tolerance, temperature 1932

inactivation 239

inhibition, eggs, waste water 999

microorganisms, kinetics, alkanes, biodegradation, oilfields, water,

USA 3768

milk, *Listeria monocytogenes*, enumeration 2085

naphthalene, biodegradation, *Pseudomonas* 573

nitrites, removal, activated sludge 1611

nitrification

dynamics, bioreactors 2623

rivers, Jordan 1656

waste water, activated sludge 1642

nitrogen

measurement, activated sludge, control, computer simulation 1285

Mathematical models cont.

nitrogen cont.

removal

activated sludge 682

slaughterhouse waste, biological treatment, activated sludge 1782

nitrophenols, biodegradation, bacteria 2557

nutrient removal, waste water, biological treatment 672

optimization, nutrients, removal, bioreactors, aerobic treatment, aerobic treatment 683

organic chemicals

biodegradation

microorganisms

soil

physicochemical properties 3493

sorption 3493

organic compounds

biodegradation, bioreactors, kinetics 2461

removal, slaughterhouse waste, biological treatment, activated sludge 1782

organic matter, biodegradation, biofilms, rivers 345

pathogens, transport, groundwater 1118

pentachlorophenol, biodegradation, *Phanerochaete chrysosporium*,

bioreactors 3592

performance, sewage, biological treatment, fluidized beds 1186

petroleum hydrocarbons, biodegradation, groundwater 1487

pharmaceutical products, waste water, biodegradation, surface water 1682

phenol, biodegradation, substrates, numbers, effects 3586

phosphorus, removal, activated sludge 410

pig slurry, bioreactors, aerobic treatment, performance 754

potato waste

utilization

microorganisms

biosurfactants, production 2385

glycerol, production 2385

poultry, carcasses, abattoirs, bacterial count 1006

quinoline, biodegradation, biofilms 2442

refuse, biodegradation, landfills, settlement 2365

rivers, microbial contamination, faecal coliforms 1127

Salmonella typhimurium, inhibition, eggs, waste water 999

settlement, pulp and paper industry, waste water, biological treatment,

activated sludge 1711

sewage

biofilms

anaerobic treatment 3273

bioreactors 3274

biological filtration, aerobic conditions, hydrodynamics, biofilms,

growth 1273

biological treatment

activated sludge 3310

chemical oxygen demand,

quantification 2258

optimization 1284

fluidized beds

anaerobic conditions, biofilms,

kinetics 1225

Turkey 2282

ponds, *Daphnia* 3333

organic compounds, biological treatment 2436

treatment, activated sludge, operation,

low temperatures 399

sewage effluent disposal, coastal areas, marine environment, microbial contamination 1135

silage

biodegradation, methane production,

anaerobic digestion 3399

microbial activities, *Listeria* 1972

Mathematical models cont.

- solutes, transport, biofilms, groundwater 279
- streams, microbial contamination, faecal coliforms 1127
- structure activity relationships, organic compounds, toxicity, activated sludge, microorganisms 401
- substrates
 - microbial degradation, bioreactors 1200
 - utilization, sewage, biological treatment, fluidized beds, *Zoogloea ramigera*, biofilms 1805
- surfactants, rivers, biodegradation, bacteria, UK 3646
- temperature, kinetics, pig manure, biodegradation, bioreactors 1766
- trichloroethylene
 - biodegradation
 - Nitrosomonas europaea*, enzymes, kinetics 2456
 - Pseudomonas cepacia*, bioreactors 3475
- vegetables, wastes, anaerobic digestion 3352
- volatile compounds, biodegradation, biological fixed-film systems 2444
- waste gases, biological filtration 3247
- waste water
 - biodegradation, activated sludge 407
 - biofilms
 - anaerobic treatment 3273
 - bioreactors 3274
 - biological treatment 338, 340
 - activated sludge, optimization 1284
 - fluidized beds, Turkey 2282
 - phosphorus, removal 3752
 - ponds, pathogens, mortality, Tanzania 2336
 - nitrogen, removal, *Anabaena* 674
- waste water treatment
 - biofilms, heterotrophic microorganisms, autotrophic microorganisms, competition 1188
- bioreactors
 - biofilms, detachment, dynamics 2272
 - fluidized beds, optimization 1279
 - hydraulics 335
- denitrification, microorganisms, immobilization, reviews 3715
- oxidation ditches 421
- ponds, design 3337
- water distribution, water quality, microorganisms, disinfectants, substrates, transport 1748
- water purification, biological filtration, sand 740
- water supply, disinfection, viruses, inactivation, kinetics 2179
- wetlands, constructed, waste water treatment, evaluation 1371
- wheat bran, biodegradation, *Aspergillus niger*, fermentation 544
- wheat straw, animal manures, composting, mushroom compost, production 1242
- xylene, biodegradation, biofilms, membranes, dynamics 1493

Mayonnaise

- Escherichia coli*
 - survival
 - storage, temperature 913
 - temperature 1988
 - USA 183
- microbial contamination, *Salmonella enteritidis* 1989
- Salmonella enteritidis*
 - survival
 - pH 914
 - temperature 914

Meat

- Bacillus cereus*, control, gamma radiation 222
- Campylobacter coli*, monitoring, reviews, USA 2818
- Campylobacter jejuni*, monitoring, reviews, USA 2818

Meat cont.

- Carnobacterium*, identification, RNA probes 128
- chilling, storage, microbial contamination, temperature 959
- contamination
 - bacteria, Italy 2031
 - Escherichia coli*
 - South Africa 863
 - toxins, production, detection, DNA probes, USA 2918
 - Staphylococcus aureus*, South Africa 863
- decontamination, pathogens, lactic acid 1059
- Enterococcus*, *Streptococcus*, enumeration 2906
- Escherichia coli*
 - bacterial toxins, detection 3896
 - monitoring, reviews, USA 2818
- fermentation, *Lactococcus lactis*, nisin, production 2171
- foodborne diseases, *Listeria* 2035
- juices, *Listeria monocytogenes*, bacteria, interactions, carbon dioxide enrichment 127
- Leuconostoc*, identification, RNA probes 128
- Leuconostoc carnosum*, bacteriocins, characterization 58
- Listeria monocytogenes*
 - growth 1920
 - isolation 958
 - monitoring, reviews, USA 2818
- microbial contamination
 - Clostridium perfringens*, China 130
 - control
 - lactic acid 2036
 - models 1056
 - determination, plate count 132
 - health hazards, control 2033
 - Listeria monocytogenes*, China 130
 - Salmonella*, China 130
 - Staphylococcus aureus*, China 130
- microbial flora, *Listeria monocytogenes*, interactions 957
- organs, *Salmonella*, Spain 2034
- packaging, plastic film, *Brochothrix thermosphacta* 2046
- pathogens, control, radiation, resistance 1875
- processing
 - equipment, *Staphylococcus*, benzalkonium chloride, resistance 240
 - microbial contamination, lactic acid bacteria, Finland 2059
- Pseudomonas fragi*, control,
 - Pseudomonadaceae, antibacterial agents 1089
- raw, minced, microbial contamination, quantification 17
- refrigeration, *Pseudomonas fluorescens*, detection, ELISA 872
- Salmonella*
 - detection
 - DNA probes 2972
 - immunodiffusion tests
 - Canada 1934
 - USA 1934

spoilage

- Lactobacillus curvatus*, strains, taxonomy 267
- Lactobacillus sake*, strains, taxonomy 267
- surfaces, bacteria, adhesion, mechanisms, reviews 2973
- vacuum packaging, *Leuconostoc*, spoilage, biological control, *Lactococcus*, bacteriocins 956

Meat hygiene, abattoirs, beef, USA 10**Meat production**

- factories, structures, surfaces, condensates, microbial contamination 3026
- microbial contamination, pigmeat, spoilage 2050
- moulds, control, coatings, fungicides 2150

Meat production cont.

- waste water
 - biological treatment
 - lagoons
 - coliphages 1145
 - indicator species 1145
 - denitrification, wetlands, New Zealand 1367

Meat products

- bacterial count, EU regulations, effects 2061
- Clostridium botulinum*, survival, toxins, production, vacuum packaging, storage, temperature 1922
- contamination
 - bacteria, Italy 2031
 - Escherichia coli*, South Africa 863
 - Listeria monocytogenes*, techniques, isolation 126
 - Staphylococcus aureus*, South Africa 863
- Escherichia coli*, isolation 34
- foodborne diseases, *Listeria* 2035
- lipolytic bacteria, techniques, isolation, development 40
- Listeria monocytogenes*
 - control, organic acids 1049
 - detection, culture media 870
 - survival
 - nitrites 980
 - pH 980
- microbial contamination
 - Clostridium perfringens*, China 130
 - Listeria monocytogenes*, China 130
 - phosphates, antimicrobial properties, reviews 2971
 - Salmonella*, China 130
 - Salmonella typhimurium*, models 2849
 - Staphylococcus aureus*, China 130
- vacuum packaging, microbial contamination, control, microwave treatment 3050

Meatworks effluent

- biogas, production, anaerobic treatment, Germany 491
- denitrification, *Glyceria maxima*, wetlands 1331

Mecoprop

- biodegradation
 - Alcaligenes denitrificans*+*Pseudomonas glycinea*+*Pseudomonas marginalis* 3615
 - soil 620

Mediterranean, calcareous rocks, biodeterioration, fungi 2120**Mediterranean sea, enterovirus, sea water, DNA probes, polymerase chain reaction, comparison 3891****Medium chain fatty acids**

- biodegradation
 - Aspergillus* 2558
 - Cladosporium* 2558
 - Fusarium* 2558
 - Penicillium* 2558
 - Trichoderma* 2558

- decanoic acid, production, alcohols, biodegradation, *Issatchenkia scutulata* var. *scutulata* 517
- octanoic acid, production, alcohols, biodegradation, *Issatchenkia scutulata* var. *scutulata* 517

Megasphaera cerevisiae, ribosomal rna, genes, sequences 3121**Melons**

- keeping quality, storage, pretreatment, comparison 1926
- microbial contamination, fungi, control 1926
- storage, *Escherichia coli*, survival, temperature 2007

Menstruation, products, biodegradation, anaerobic digestion 653**Mentha piperita**

- essential oils
 - foods
 - Listeria monocytogenes*, control 2153
 - Salmonella enteritidis*, control 2153

- Mercury**
biodegradation, *Bacillus pasteurii* 1577
methylation, *Desulfovibrio desulfuricans*, cobalamin, mediation 3674
production, water, microorganisms 3663
reduction, *Bacillus pasteurii* 2594
sorption, *Pseudomonas aeruginosa* 641
- Merluccius**, microbial contamination, spoilage, South Africa 2021
- Metabolites**, toxicity, organic compounds, biodegradation, *Mycobacterium vaccae*, soil 574
- Metals**
adsorption, *Eichhornia crassipes* 589
anaerobic digestion
cattle manure, methane production, India 1390
poultry manure, methane production, India 1390
whey, methane production, India 1390
bacterial leaching, books 2804
bioremediation
biofloculants, production, cyanobacteria, biofilms 3224
techniques 3221
inhibition, food, *Staphylococcus aureus*, control, phosphates 1044
Listeria monocytogenes, detection, polymerase chain reaction 1904
microbial corrosion
biocides, effects, determination 1022
books 2804
Gallionella, laboratory tests, cultures 1902
oxidation, microorganisms, review 657
reduction, microorganisms, review 657
removal, cyanobacteria, wetlands, reviews 3652
surfaces, biofilms, disinfection, monochloroamine 2164
- Metals + citrates**, biodegradation, *Pseudomonas fluorescens* 2714
- Metamitron**, biodegradation, *Rhodococcus*, soil 1565
- Methane**
production, food wastes, anaerobic digestion, Korea Republic 3813
removal, coal mines, polluted air, *Methylomonas fodinarum*, biological filtration 3797
- Methane production**
acetates
utilization
Clostridium, genetic engineering 1420
microorganisms, reviews 485
agricultural wastes, composting + anaerobic digestion 1758
anaerobic digesters
bacteria, temperature 431
Methanobacterium, temperature 431
Methanothrix, temperature 431
microorganisms, granules, comparisons 437
bacteria, metabolism, reviews 1798
bagasse, biodegradation, anaerobic digestion, rumen microorganisms 2471
biological filtration, anaerobic treatment, biomass, characterization 1269
bioreactors, mass transfer, enhancement 2350
butyrate, biodegradation, anaerobic treatment 2401
cane sugar, waste water, biological treatment, India 713
cattle manure
anaerobic digestion 3806
metals, India 1390
cattle slurry+rice straw, anaerobic digestion 3803
cattle slurry+wheat straw, anaerobic digestion 3803
cellulosic wastes, biodegradation, anaerobic digesters, operation, monitoring 3398
coffee industry, wastes, anaerobic digestion 3756
cotton waste, anaerobic treatment, India 2665
- Methane production cont.**
dairy effluent, anaerobic digestion, USA 1387
effluents, fatty acids, waste water treatment, biological fixed-film systems 2392
formates
utilization
Methanobacterium formicicum 471
Methanobacterium thermoformicicum 471
inhibition
cadmium, anaerobic digestion 3661
chlorinated alkenes 2457
fatty acids 1386
waste water treatment, anaerobic digestion, sodium 2347
kinetics
biofilms, volatile fatty acids, utilization 424
methane production, kinetics, palm oil mill effluent, biodegradation, bioreactors, microorganisms, immobilization, saponite 1421
palm oil mill effluent, biodegradation, methane production, kinetics, bioreactors, microorganisms, immobilization, saponite 1421
maize bran, biodegradation, anaerobic digestion, rumen microorganisms 2471
Methanobacterium byrantii, fatty acids, inhibition 1386
Methanobacterium formicicum, fatty acids, inhibition 1386
Methanobacterium thermoautotrophicum 481
Methanosarcina barkeri, fatty acids, inhibition 1386
microorganisms, anaerobic digesters, analysis 299
optimization, anaerobic digesters, microbial flora 492
Parthenium, fermentation, inoculum density 2390
Parthenium hystrophorus, fermentation, India 2393
pig manure, fermentation, psychrotrophic microorganisms, cold climates, effects 3807
piggery effluent, anaerobic treatment, bioreactors 1765
plant residues, composting + anaerobic digestion 1758
poultry manure, anaerobic digestion, metals, India 1390
pyruvic acid, utilization, *Methanosarcina barkeri* 515
refuse
anaerobic digestion
enzymes 763
start-up 2344
landfills, assessment, bioassays 2245
sewage
anaerobic digestion 2354
ponds, anaerobic treatment, Portugal 1375
sewage sludge
anaerobic digestion
bioreactors 2352
supports, sepiolite, effects 435
silage, biodegradation, anaerobic digestion, mathematical models 3399
silkworms, pupae, wastes, anaerobic digestion 487
sorghum, biodegradation, anaerobic digesters, carbon dioxide, removal 486
straw, piggery effluent, anaerobic digestion 493
surfactants, biodegradation, anaerobic digestion 1567
tannery waste, anaerobic digestion, kinetics 3390
tobacco, wastes, biodegradation, anaerobic digestion 3393
tomatoes, processing, wastes, anaerobic digestion 490
utilization
sewage sludge, books 2801
- Methane production cont.**
utilization cont.
wastes, books 2801
volatile fatty acids, biodegradation, waste water, anaerobic treatment, bioreactors 2559
waste paper, biodegradation, landfills, *Eubacterium*, *Methanobrevibacter*, interactions 2391
wastes
anaerobic digestion
assessment 439
bioreactors 2352
whey, anaerobic digestion, metals, India 1390
wine distillery waste water, anaerobic treatment, microorganisms, immobilization 482
- Methanesulfonic acid**, utilization, bacteria, monooxygenase 658
- Methanobacterium**, anaerobic digesters, methane production, temperature 431
- Methanobacterium byrantii**, methane production, fatty acids, inhibition 1386
- Methanobacterium defluvi**, taxonomy, anaerobic digesters, sewage sludge 3179
- Methanobacterium formicicum**
fatty acids, biodegradation, anaerobic digestion 3600
formates
production 471
utilization, methane production 471
methane production, fatty acids, inhibition 1386
- Methanobacterium thermoautotrophicum**
alkyl halides, biodegradation 1452
cellulosic wastes, biodegradation, anaerobic digesters, morphology 3860
methane production 481
propionic acid
biodegradation
acetic acid, effect, anaerobic conditions 3488
butyric acid, effect, anaerobic conditions 3488
- Methanobacterium thermoflexum**, taxonomy, anaerobic digesters, sewage sludge 3179
- Methanobacterium thermoformicicum**
formates
production 471
utilization, methane production 471
- Methanobrevibacter**, waste paper, biodegradation, landfills, *Eubacterium*, methane production, interactions 2391
- Methanogenic bacteria**, sulfate reducing bacteria, competition, sulfates, transport processes, mass flow, models 669
- Methanogens**
acetogens, competition, methanol, biodegradation, bioreactors 1229
bioreactors, immunology 3859
chlorofluorocarbons, biodegradation 2403
interactions
sulfate reducing bacteria
hydrogen sulfide, models 2709
pH, models 2709
organochlorine compounds, toxicity, techniques, determination 3185
- Methanol**
addition
biological filtration
nitrogen
removal
waste water treatment
UK 3727
USA 3727
nutrients, removal, activated sludge, Sweden 3704
biodegradation
bioreactors, methanogens, acetogens, competition 1229
Methanosarcinaceae, anaerobic digestion 1566
Thiosphaera pantotropa, genetics 3635
- Methanosarcina barkeri**
methane production, fatty acids, inhibition 1386
pyruvic acid, utilization, methane production 515

Methanosarcina mazi

cellulosic wastes, biodegradation, anaerobic digesters, morphology 3860
fatty acids, biodegradation, anaerobic digestion 3600

Methanosarcinaceae, methanol, biodegradation, anaerobic digestion 1566**Methanothrix**

anaerobic digesters, methane production, temperature 431
granules, propionate, biodegradation, waste water, bioreactors, performance 1228
sludges, granules, characteristics, phenols, waste water, biodegradation, bioreactors 2551

Methanotrophic microorganisms

naphthalene, biodegradation, polyhydroxybutyrate 2449
trichloroethylene, biodegradation, polyhydroxybutyrate 2449

Methyl bromide, biodegradation, sediment, anaerobes 626**Methyl *t*-butyl ether**, biodegradation, bacteria, isolation, bioreactors, sludges 3543**Methylene blue**, decolorization, *Bacillus* 2666**Methylene chloride**

biodegradation
biological filtration, microorganisms 386
waste gases, biological filtration, *Hyphomicrobium* 3307

Methylmercaptan, biodegradation, anaerobic digesters, sludges, sulfate reducing bacteria, isolation 3445**Methylmercury**

production, lakes, anaerobic conditions, sulfate reducing bacteria, Finland 3857
transformation
anaerobic conditions, *Desulfovibrio desulfuricans* 3664
sediment, anaerobic conditions, sulfate reducing bacteria 3664

Methylobacter, taxonomy 2716**Methylobacterium**, sulfate pulping, effluents, organochlorine compounds, removal 2417**Methylobacterium extorquens**, polyhydroxybutyrate, production 743**Methylococcaceae**, taxonomy 2716**Methylococcus**, taxonomy 2716**Methylocystis**

immobilization, trichloroethylene, biodegradation 3444
trichloroethylene, biodegradation, immobilization, materials, comparisons 564

Methylomonas fodinarum, biological filtration, methane, removal, coal mines, polluted air 3797**Methylomonas methanica**, trichloroethylene, biodegradation, methane monooxygenase, synthesis 3487**Methylosinus**, taxonomy 2716**Methylosinus trichosporium**

aliphatic hydrocarbons, biodegradation, enzymes, determination, polymerase chain reaction 796
chloroform, biodegradation, *Pseudomonas putida*, oxygenases, activity 3446
halogenated hydrocarbons, biodegradation 1498
trichloroethylene
biodegradation, *Pseudomonas putida*, oxygenases, activity 3446
contamination, groundwater, bioremediation 3223

Methylphenol, biodegradation, *Comamonas testosteroni* 3589**Methylquinoline**, biodegradation, rivers, sediment, anaerobic conditions 505**Mexico**

bioremediation
waste water
heavy metals
aquifers 3216
mineral oils 3216

Mexico cont.

China, Ecuador, shrimps, microbial contamination, retail marketing, wholesale marketing, comparisons 938
chocolate, contamination, *Salmonella* 2937
coffee industry, waste water, biological treatment, anaerobic conditions 3760
food wastes, composting 2299
molasses, yeasts, isolation, identification 3129

Microbial activities

activated carbon, techniques, estimation, assays 2782
amines, production, sprouts, storage, determination 2011
biofilms, estimation 1217
biological fixed-film systems, biofilms, dyes, azo compounds, inhibition 1280

control

waste water
biomass
sorption
cyanides 2140
pasteurization 2140
kinetics, benzene, biodegradation, porous media, mathematical models 2700
Listeria, silage, mathematical models 1972

organic carbon, biodegradation, lakes, nitrogen, phosphorus, effects 1124
petroleum hydrocarbons, biodegradation, polluted soils 1520
pig manure, composting 3809
sewage, biological treatment, activated sludge, techniques, monitoring 3180
sewage sludge, coal fly ash, composting, Hong Kong 2302

Microbial contamination**abattoirs**

machinery
Aeromonas 2130
Listeria 2130
Yersinia 2130

pigs

carcasses
Aeromonas 2130
Listeria 2130
Yersinia 2130
structures, surfaces, condensates 3026
aerosols, antibiotics, solutions, bacteria 2098

air, buildings, detection, Spain 1872
aquifers, Poland 859
assessment

abattoirs, slaughtering equipment, India 2127
hands, washing, hygiene 1876
bathing waters, coastal areas, *Staphylococcus*, indicator species 3156
beaches, sand, Portugal 3136

beef

carcasses, abattoirs, detection, statistical analysis, Canada 2045

Escherichia coli

control
acetic acid 964
lactic acid 964
pathogens, control, trisodium phosphate 2149

beverages

determination, Nigeria 916
yeasts, detection 1994

bottled water

mineral waters, Enterobacteriaceae, Germany 2887
springs (water), Enterobacteriaceae, Germany 2887

broilers, carcasses, abattoirs, processing, Kuwait 2074

butter, determination, Pakistan 176
Campylobacter, poultry, carcasses, trisodium phosphate, washing, control 2986

carrots, storage 104
cauliflowers, storage 104

cheeses

bacteria 178
Irish Republic 2093

Microbial contamination cont.

chicken meat
carcasses, Saudi Arabia 150
skin, pathogens, control, chemicals 2067

chopping boards

plastics
pathogens
disinfection 1053
food hygiene 837

wood

pathogens
disinfection 1053
food hygiene 837

cider, *Lactobacillus*, pH, Spain 1990

Clostridium perfringens, turkey meat, vacuum packaging, temperature, effects 998

composting, buildings, air pollution 1257
control

bioreactors, dissolved oxygen 2998
broilers, carcasses, reprocessing 2992
catheters, materials, protective coatings, cooper + silver 2129

fish

gamma radiation 122
packaging, modified atmosphere storage 947

fish products, antibacterial agents, protamine 1892

food, irradiation, reviews 2143

food safety, hazard analysis critical control point 1869

foods 212

Bdellovibrio bacteriovorus 2170
irradiation, assessment, DNA hybridization 1038

hands, soaps 1058

hard clams, irradiation, gamma radiation 3064

irradiation, spices, enzyme activity, evaluation 2942

meat

lactic acid 2036
models 1056

microwave treatment, meat products, vacuum packaging 3050

packaging, dried egg 2993

pigmeat, vacuum packaging, disinfection, sprays 976

prawns, gamma radiation 122

seafoods, gamma radiation 122

steam sterilization, spices, enzyme activity, evaluation 2942

control disinfection, heat treatment, beef, methodology 971

drinking water

disinfection, conferences 827
techniques, Chile 25

effluents

coliform bacteria
control

filtration 3165

floculation 3165

irradiation 3165

egg products, biodeterioration, India 2066
eggs

cooling, *Salmonella enteritidis* 2987
Salmonella 2077

Enterobacter cloacae, enteral feeding, hospitals, homes 15

equipment, determination, ultrasonic treatment 205

Escherichia coli, rivers, Canada 1136
faecal coliforms

estuaries, techniques, monitoring, mathematical models, USA 1137

rivers, Canada 1136

feeds, reviews, UK 1967

fish

Escherichia coli, enterotoxins, production, screening 942

modified atmosphere storage, chlorine 121

storage, brine 115

fish ponds, Nigeria, seasons, effects 9

food

Spain 2000

workers, *Listeria*, hands 1870

Microbial contamination cont.

- food production, health hazards, testing 836
- food safety, food industry, techniques, control, reviews 1931
- foods
 - bacteria, control, tannins 3099
 - Bahrain 2815
 - cooking methods, Japan 1919
 - detection 876
 - faecal coliforms, indicator species, Italy 2908
 - food safety, evaluation 1903
 - moulds 1927
 - packaging, starch, polyethylene film, degradable 1924
 - pathogens, control, irradiation, reviews 1036
 - reports 826
 - sampling, reviews 32
 - yeasts 1927
- fruit, hospital food service, food hygiene, assessment, Costa Rica 2828
- fruit juices
 - Bacillus* 1997
 - production, reviews 1996
- groundwater
 - farms
 - Canada 2230
 - USA 2230
 - USA 860
- harbours, sea water, *Vibrio cholerae*, health risk, USA 3031
- ice cream, surveys, UK 2839
- Ictalurus punctatus*, fillets, controlled atmosphere storage 866
- indicator species, fish, fish farms, sewage effluent, recycling 3367
- indicators, shellfish, books 830
- infant foods, *Citrobacter freundii*, detection 848
- infant formulae, dried milk, *Salmonella bovis morbificans*, Italy 2997
- instruments, medical treatment, pathogens, biofilms, control, antibiotics, evaluation 3021
- Klebsiella*, enteral feeding, hospitals, homes 15
- lamb (meat)
 - carcasses
 - coliform bacteria, enumeration 2056
 - psychrotrophic bacteria 2055
 - preparation, *Pseudomonas*, physico-chemical properties 2980
- mangoes, processed products, coliform bacteria, Australia 2949
- marine environment
 - coastal areas, United Arab Emirates 1138
 - fish scrap, waste disposal, USA 1397
 - mayonnaise, *Salmonella enteritidis* 1989
- meat
 - chilling, storage, temperature 959
 - Clostridium perfringens*, China 130
 - determination, plate count 132
 - health hazards, control 2033
 - Listeria monocytogenes*, China 130
 - processing, lactic acid bacteria, Finland 2059
 - raw, minced, quantification 17
 - Salmonella*, China 130
 - Staphylococcus aureus*, China 130
- meat production
 - factories, structures, surfaces, condensates 3026
 - pigmeat, spoilage 2050
- meat products
 - Clostridium perfringens*, China 130
 - Listeria monocytogenes*, China 130
 - phosphates, antimicrobial properties, reviews 2971
 - Salmonella*, China 130
 - Salmonella typhimurium*, models 2849
 - Staphylococcus aureus*, China 130
- melons, fungi, control 1926
- Merluccius*, spoilage, South Africa 2021
- milk, sampling 165
- milk hygiene, Pakistan 163
- milk pipelines, materials, Ukraine 2083

Microbial contamination cont.

- milk preservation, lactoperoxidase system, techniques, assessment, comparisons 2081
- milk quality, Pakistan 163
- mineral waters
 - Enterobacter cloacae*, survival 858
 - Escherichia coli*, survival 858
 - Klebsiella pneumoniae*, survival 858
 - Pseudomonas aeruginosa*, survival 858
- nappies, composts 1240
- offal, vacuum packaging, Enterobacteriaceae, determination 2037
- onions, shredding, storage, temperature, effects 933
- paprika, *Salmonella*, Germany 1986
- pathogens
 - food, cook-chill system, Malaysia 1945
 - lamb (meat), reviews 2983
- petroleum, bacteria 3008
- pigmeat, soyabean husks, *Listeria monocytogenes*, control, heat treatment 3046
- potatoes, storage decay, *Erwinia carotovora*, population dynamics 927
- poultry
 - carcasses, techniques, assessment 2989
 - skin
 - refrigeration, South Africa 2063
 - Salmonella*, control, disinfectants, assessment 997
- poultry meat, production, waste water, determination, ATP, bioluminescence 153
- poultry products, *Yersinia* 156
- prawns, fresh water, *Aeromonas*, Bangladesh 2966
- prepared foods, salads, UK 99
- prostheses
 - rubber
 - bacteria, biofilms, characterization 1018
 - yeasts, biofilms, characterization 1018
- Pseudomonas*, drinking water, bottled, Greece 26
- Pseudomonas aeruginosa*, rivers, Canada 1136
- rivers
 - faecal coliforms, mathematical models 1127
 - indicator species, mathematical models, Canada 1126
- salads, hospital food service, food hygiene, assessment, Costa Rica 2828
- salmon, processing, *Listeria monocytogenes*, Norway 2954
- sausages, meat, storage, heat treatment 90
- sausages
 - Germany 148
 - Yersinia* 2062
- sea water, health hazards, Maldives 2834
- seafoods
 - Escherichia coli*, enterotoxins, production, screening 942
 - Italy, monitoring, control 2964
 - sewage, rotavirus, Brazil 3364
 - sewage effluent disposal, coastal areas, marine environment, mathematical models 1135
- shrimps
 - China, Ecuador, Mexico, retail marketing, wholesale marketing, comparisons 938
 - reviews
 - Ecuador 939
 - India 939
 - Malaysia 939
 - Philippines 939
 - USA 939
- slaughterhouse waste, discharge, rivers, Nigeria 3143
- smoked fish
 - Listeria monocytogenes* 2956
 - salmon, vacuum packaging, storage life 2019

Microbial contamination cont.

- soyabean flour, storage, packaging materials, comparisons 2935
 - spacecraft, equipment 206
 - spices, herbs, reviews 1985
 - spinach, storage 104
 - streams, faecal coliforms, mathematical models 1127
 - surface water
 - coliform bacteria
 - control
 - filtration 3165
 - flocculation 3165
 - irradiation 3165
 - rotavirus, Brazil 3364
 - surgical instruments, disinfection 208
 - swimming pools
 - assessment, South America 3030
 - bacteria, control, chloroisocyanurates 209
 - faecal coliforms 3032
 - tuna, canning, quality 941
 - turkeys
 - feathers
 - removal
 - pathogens 2075
 - Salmonella*, processes, comparison 2076
 - variation, sausages, production 985
 - vegetables, storage 104
 - waste water
 - application to land, groundwater, indicator species, bacteria, Spain 1123
 - irrigation, groundwater, indicator species, bacteria, Spain 1123
 - storage, reservoirs, Israel, physico-chemical parameters, effects 3373
 - water
 - pig slurry, application to land, indicator species 2223
 - recreational, health hazards 2835
 - water supplies, health hazards, Maldives 2834
 - water supply
 - Cryptosporidium*, Canada 2841
 - Giardia*, Canada 2841
 - water systems
 - biocides, control, bacteria, resistance 2133
 - Pseudomonas aeruginosa*, slimes, formation, characterization 3029
 - wells, hepatitis A, waterborne diseases, schools, Italy 2836
- Microbial corrosion**
- books 2803
 - concrete
 - sewerage, Japan 3012
 - waste water treatment 3014
 - disinfectants 3058
 - metals
 - biocides, effects, determination 1022
 - books 2804
 - Gallionella*, laboratory tests, cultures 1902
 - mortar, techniques, analysis, comparisons, Spain 1909
 - paintings, techniques, analysis, comparisons, Spain 1909
 - research, water systems, South Africa 1030
 - reviews 1868
 - sewerage, pipes, concrete, fungi, isolation 3018
 - steel, sulfate reducing bacteria 201
 - stonework, sandstone, Spain 2118
 - Thiobacillus*, control, biological competition, sewerage, concrete 1024
- Microbial degradation**
- pollutants, environment, *Phanerochaete chrysosporium*, biochemistry 271
 - substrates, bioreactors, mathematical models 1200
- Microbial flora**
- activated sludge, reviews 1864
 - anaerobic digesters
 - identification, polymerase chain reaction 797
 - methane production, optimization 492
 - retention time, effects 434

Microbial flora cont.

- aromatic hydrocarbons, biodegradation, soil 1491
- bacterial count, beef, dried meat, Brazil 2039
- bakery industry effluents
 - characterization 697
 - identification 697
- beef, cold storage 137
- biofilms
 - oilfields
 - machinery, characterization 3895
 - water, characterization 3895
 - reviews 1864
- biological fixed-film systems, characterization, RNA probes 2703
- biomass, kinetics, bioreactors, performance 1215
- bioremediation, cyanides, biodegradation, polluted soils 1552
- carrots, processing, Italy 2001
- cattle dung, anaerobic digesters 2682
- characterization
 - sewage, anaerobic treatment 2348
 - waste water, anaerobic treatment 2343
 - water supply, Costa Rica 739
- chickpeas, prepared foods, seasonal variation, Jordan 100
- chlorinated hydrocarbons, biodegradation, culture techniques 2462
- composition, coal, tars, chemical industry, wastes, biodegradation 3769
- control
 - buffalow meat, low temperature storage, radiation 220
 - vegetables, lactic acid bacteria 3086
- cottage cheese, modified atmosphere storage 182
- culinary herbs, Austria 1987
- distribution, bioreactors, biofilms 2279
- dyes, azo compounds, decolorization, biological treatment, anaerobic conditions 3772
- fermented foods
 - India 924
 - soyabeans 112
- foods, determination 1944
- fuel oils, biodegradation, nitrogen, effects 2501
- growth
 - activated sludge
 - chromium, effects 3846
 - phenolic compounds, biodegradation, mathematical models, kinetics 1529
 - phenols, biodegradation, mathematical models, kinetics 1529
 - natural gas, biodegradation 1497
- hamburgers, beef, contamination 131
- indexes, monitoring, activated sludge, bioreactors 301
- keeping quality
 - processed cheese
 - Croatia
 - acidity 179
 - pH 179
- lamb (meat), physicochemical properties 2980
- meat, *Listeria monocytogenes*, interactions 957
- methane production, population dynamics, sewage, biological treatment, fluidized beds, anaerobic conditions 1187
- milk, sampling 165
- mineral waters, contamination, characterization 24
- nitrification, denitrification, biological filtration, filters, submerged 3698
- nutrients, removal, activated sludge 3693
- olives, preservation 108
- organic compounds, biodegradation, sediment, Slovakia 285
- pigmeat
 - carcasses, water reuse 974
 - modified atmosphere storage 141
- poultry litter, anaerobic digesters 2682

Microbial flora cont.

- respiration, inhibition, activated sludge, determination, patents 3197
 - sausages
 - characterization, Greece 983
 - keeping quality, storage, temperature 2057
 - packaging 143
 - selection, organic compounds, biodegradation, bioremediation 510
 - sewage sludge, 1,2-dichloroethylene, biodegradation, anaerobic treatment 2431
 - sewerage, sewage, runoff, urban areas, UK 3174
 - soil
 - toluene, biodegradation, concentration, effects 3559
 - trichloroethylene, biodegradation, concentration, effects 3559
 - solvents, chlorine, biodegradation, bioreactors, biofilms 2616
 - spices, Austria 1987
 - surgical equipment, gloves, survival 207
 - surimi 129
 - survival, cheeses, sodium chloride 2087
 - tetrachloroethane, biodegradation, aquifers, fatty acids, effects 1453
 - waste water treatment
 - activated sludge, characterization, Germany 400
 - bioreactors, characterization, Germany 400
 - wastes, composting, characterization 2297
 - white sugar, Hungary 84
 - zinc, removal, waste water, India 2586
- Microbial leaching**
- acid mine drainage, sulfides, North America 3792
 - nickel ore
 - Aspergillus* 1418
 - Penicillium* 1418
- Microbial lipids**, emulsifiers, production, *Pseudomonas* 2721
- Microbial quality**, drinking water, standards 288
- Microbially enhanced oil recovery**, oilfields, reviews 725
- Microbiology**
- aircraft
 - paints
 - stripping
 - waste water
 - biological treatment
 - activated sludge 2678
 - rotating biological contactors 2678
 - standards
 - waterborne diseases
 - swimming
 - control
 - Europe 280
 - North America 280
- Micrococccaceae**, lamb (meat), contamination, identification+statistical analysis 2054
- Micrococcus**, cheeses, fermentation 1010
- Micrococcus roseus**
- control, marble, discoloration, biocides, Italy 203
 - lubricant, biodegradation, esterases 3691
- Microcoleus chthonoplastes**, petroleum hydrocarbons, biodegradation, marine environment, coastal areas, Kuwait 1483
- Microcystis**
- bacterial toxins, water pollution, reservoirs, *Daphnia*, toxicity 1804
 - blooms, lakes, Netherlands, control, destratification, mixing 3105
- Microcystis aeruginosa**
- bacterial toxins, mycrocystin, lakes, water supply, Canada 3151
 - crusts, toxins, microcystins, persistence, lakes, shores 3117
 - drinking water, contamination, sheep, poisoning 29
 - hepatotoxins, release, algal blooms, treatment, copper sulfate + calcium hydroxide 3149

Microcystis aeruginosa cont.

- toxins, production, drinking water, removal, activated carbon 1741
- Microfiltration**
- sewage, anaerobic treatment + crossflow 1218
 - waste water, anaerobic treatment + crossflow 1218
- Microorganisms**
- acetates, utilization, methane production, reviews 485
 - activated sludge, organic compounds, toxicity, mathematical models, structure activity relationships 401
 - adhesion, surfaces, biotechnology, reviews 3823
 - aerobes
 - waste water
 - aerobic treatment, bioreactors 3257
 - anaerobic treatment, bioreactors 3257
 - anaerobes
 - waste water
 - aerobic treatment, bioreactors 3257
 - anaerobic treatment, bioreactors 3257
 - anaerobic conditions, chlorinated hydrocarbons, dechlorination 1486
 - anaerobic digesters, methane production, granules, comparisons 437
 - anaerobic digestion, initiation 433
 - aromatic compounds
 - biodegradation
 - isolation, identification 3406
 - USSR, reviews 2440
 - aromatic hydrocarbons
 - biodegradation
 - bioremediation, soil 3494
 - polluted soils 322
 - techniques, screening 1847
 - augmentation, potatoes, wastewater, biological treatment, activated sludge 2320
 - benzene
 - biodegradation
 - aerobic conditions 2524
 - interactions 572
 - biodiversity, enzymes, production 1783
 - biofilms, aromatic hydrocarbons, biodegradation, kinetics 3201
 - biomass
 - soil, analytical methods, estimation, reviews 812
 - sulfur fertilizers, sulfur, utilization, soil 632
 - biphenyls, biodegradation, soil, surfactants, effects 3572
 - books
 - characterization 2814
 - detection 2814
 - caesium, uptake, toxicity, reviews 3676
 - carbon tetrachloride
 - biodegradation
 - experimental design, USA 511
 - mathematical models 663
 - nitrites 526
 - nitrogen, inhibition, kinetics 3415
 - characteristics
 - p-nitrophenol, biodegradation, activated sludge 1326
 - sewage, activated sludge, bulking, foaming, Italy 1325
 - characterization, tomatoes, processing, wastes, anaerobic digestion 698
 - chlorinated phenols
 - biodegradation
 - carbonate, sediment 3596
 - nitrites, sediment 3596
 - sulfates, sediment 3596
 - coal, solubilization, fluidized beds, mathematical models 3798
 - consortia
 - identification, sludges, anaerobic digesters, inoculation 3345
 - immobilization, substrates, transformation, enhancement, reviews 3821

Microorganisms cont.

- control
 - foods, contamination, magnetic field 55
 - marble, discoloration, biocides, Italy 203
 - spacecraft, radiation, resistance 234
 - tombs, biodeterioration, Egypt 193
- creosote, biodegradation, polluted soils 322
- cultures, enrichment, atrazine, biodegradation 3617
- death, activated sludge, mathematical models 787
- detection, mass spectrometry, books 2810
- disinfectants, substrates, transport, water distribution, water quality, mathematical models 1748
- enzymes, chlorinated hydrocarbons, biodegradation, aerobic conditions 2453
- estuaries, microcosms, filters, fuel oils, biodegradation, Nigeria 3571
- ethanol production, maize cobs, hydrolysates, xylose, enrichment 474
- fertilizer industry, waste water, Nigeria 2577
- fertilizers, fuel oils, biodegradation, USA 3544
- flocculants, production 2701
- flour mills, machinery, contamination, distribution 2936
- food, risk assessment 2821
- food spoilage, control, pressure 266
- foods, spoilage, reviews 2910
- fuels, liquids, production, reviews 3400
- growth, humus, transformation, water purification, bank filtration 1749
- halogenated hydrocarbons
 - biodegradation
 - biofilms, kinetics 2395
 - reviews 3432
- hands, cleaning, food hygiene 839
- heat resistance, spacecraft 234
- heavy metals, reduction 3819
- hydrocarbons
 - biodegradation, nitrates, reduction 2529
 - soil, biodegradation 2525
- hydrogen sulfide, metabolism, fuel oils, biodeterioration 197
- hyperthermophilic, metabolism, reviews 1802
- identification 822
 - mass spectrometry, books 2810
- immobilization
 - cellulose triacetate, sewage, biological treatment 1190
 - methane production, wine distillery waste water, anaerobic treatment 482
 - poly(vinyl alcohol), denitrification, bioreactors 1168
 - sand, naphthalenesulfonic acid, biodegradation, waste water, inorganic salts 3427
 - saponite, bioreactors, methane production, kinetics, palm oil mill effluent, biodegradation, methane production, kinetics 1421
 - supports, whey cheese, biodegradation, anaerobic digestion 707
 - waste water treatment, denitrification, mathematical models, reviews 3715
- indicators
 - bark, composts, stability 2295
 - sawdust, composts, stability 2295
- iron, oxidation, wells, clogging 3033
- isolation, marine environment, polycyclic hydrocarbons, biodegradation, Canada 1492
- kinetics, activated sludge, bulking 1821
- lakes, sucralose, biodegradation, catabolism 1438
- mercury, production, water 3663
- metabolism, nitrification, waste water treatment, monitoring, gas production 3723
- metals
 - oxidation, review 657

Microorganisms cont.

- metals cont.
 - reduction, review 657
- methane production, anaerobic digesters, analysis 299
- methylene chloride, biodegradation, biological filtration 386
- microbial mats, absorption coefficients, instrumentation, sensors, fibre optics 3181
- mineral oils
 - biodegradation
 - polluted soils
 - ketones, production 1509
 - organic acids, production 1509
- molasses, utilization, biosurfactants, production 2377
- naphthalene, biodegradation, surfactants, effects 3508
- naphthenic acids, biodegradation, oils, mine tailings, Canada, Alberta 1488
- naphthylamine, biodegradation, activated sludge 566
- nitrates (esters), biodegradation, reviews 2434
- nutrients, petroleum hydrocarbons, biodegradation, soil 2519
- organic chemicals
 - biodegradation
 - soil
 - physicochemical properties, mathematical models 3493
 - sorption, mathematical models 3493
- organic compounds
 - biodegradation
 - adaptation 1439
 - soil 324
 - carbon dioxide, measurement 3495
 - surfactants, reviews 2402
- organic nitrogen compounds, aromatic compounds, biodegradation, reviews 3480
- organochlorine compounds, biodegradation, bioremediation, soil 3494
- oxygen, petroleum hydrocarbons, biodegradation, soil 2519
- paper mill sludge, activated sludge, bulking, performance 1735
- para-saylene, biodegradation, interactions 572
- pentachlorophenol, biodegradation, polluted soils 322
- phenanthrene
 - biodegradation 1519
 - soil, surfactants, effects 3572
 - surfactants, effects 3508
- phosphates, solubilization, soil 3747
- plastics, biodegradation, evaluation 606
- pollutants, hydrocarbons, biodegradation 2531
- poly-(β -hydroxybutyrate-co- β -hydroxyvalerate)
 - biodegradation
 - aerobic conditions 3614
 - anaerobic conditions 3614
- polychlorinated biphenyls
 - biodegradation
 - contaminated soils, determination, gene probes 3577
 - isolation 3424
 - lakes, sediment, Germany 3435
 - rivers, sediment, Germany 3435
 - soil, anaerobic conditions 2466
- polycyclic hydrocarbons
 - biodegradation
 - bioremediation
 - soil
 - sorption, extraction 3490
 - transport processes, extraction 3490
 - sewage sludge, detection, screening 813
- polyethylene films, biodegradation, starch, environmental factors 1543
- polymers
 - biodegradation 1544
 - polyesters, biodegradation, soil 3606
 - poly(2-oxepanone), biodegradation 1450

Microorganisms cont.

- polyphenols, biodegradation, reviews 598
 - population dynamics, aerobic conditions, water systems, drainage, biomass 3824
 - potato waste
 - utilization
 - biosurfactants, production, mathematical models 2385
 - glycerol, production, mathematical models 2385
 - preliminary treatment, aerobic conditions, olive oil, production, waste water, anaerobic treatment, effects 700
 - protopectinases 770
 - purines, biodegradation 1434
 - resistance
 - biocides 2147
 - epidemiology 3054
 - Germany, epidemiology 3053
 - rivers, sediment, polychlorinated biphenyls, biodegradation, USA 2463
 - salted fish
 - proteinases
 - production
 - identification, Egypt 113
 - isolation, Egypt 113
 - sawdust, plant growth regulators, biodegradation, composting 1239
 - selenium, transformation, environment, anaerobic conditions 3696
 - sewage sludge, dimethyl phthalate, biodegradation, Bulgaria 2408
 - skin, cleaning, food hygiene 839
 - soil
 - dimethyl phthalate, biodegradation, Bulgaria 2408-2409
 - sucralose, biodegradation, catabolism 1438
 - sorption, waste water, heavy metals, ions, removal 3666
 - starch, biodegradation, anaerobic treatment, chemical properties, effects 3602
 - stonework, biodeterioration, biofilms, ecology, Italy 3015
 - styrene, biodegradation, reviews 2515
 - substrates, upgrading 286
 - sulfur
 - removal
 - gases, reviews 3681
 - liquids, reviews 3681
 - supports
 - activated carbon, phenol, biodegradation, comparisons 2702
 - ion exchange resins, phenol, biodegradation, comparisons 2702
 - surfactants, coke, wastes, aromatic hydrocarbons, biodegradation, bioremediation 3800
 - temperature, petroleum hydrocarbons, biodegradation, soil 2519
 - toluene
 - biodegradation
 - interactions 572
 - soil, nutrients, effects 575
 - waste water, azo compounds, biodegradation 1446
 - wastes, composting, temperature, water content, effects 3280
 - water, detection, reviews 3190
- Microstraining**, waste water, preliminary treatment, Germany 1779
- Microthrix**, activated sludge, foaming, France 1316
- Microthrix parvicella**
activated sludge
foaming
isolation 1114
Netherlands 1319
- Microwave radiation**, *Bromus inermis*, silage making 2690
- Microwave treatment**
bacteria, survival 1116
microbial contamination, control, meat products, vacuum packaging 3050
- Milk**
aflatoxins, determination, thin layer chromatography 173
Campylobacter jejuni, reviews 168

Milk cont.

- contamination
 - Campylobacter jejuni*, techniques, isolation, culture media 160
 - Escherichia coli*, resistance, antibiotics, Iran 2996
 - Listeria monocytogenes*, detection, polymerase chain reaction 16
 - Escherichia coli*, reviews 170
- fumonisin
 - detection
 - ELISA 175
 - liquid chromatography 175
- Gram negative bacteria, control, heat treatment 164
- Listeria monocytogenes*
 - control, heat treatment 164
 - enumeration, mathematical models 2085
 - heat injury
 - recovery, reducing agents 2202
 - techniques, recovery 1890
 - reviews 171
 - microbial contamination, sampling 165
 - microbial flora, sampling 165
 - Mycobacterium tuberculosis*, reviews 172
 - pathogens, books 238, 833
 - pressure treatment, pathogens, control 3045
 - Pseudomonas*, proteinases, heat treatment 2082
 - Pseudomonas aeruginosa*, enterotoxins, production 157
 - Salmonella*
 - detection 2084
 - reviews 169
 - Staphylococcus aureus*, reviews 166
 - Streptococcus agalactiae*, reviews 167
- Milk hygiene**, microbial contamination, Pakistan 163
- Milk pipelines**, materials, microbial contamination, Ukraine 2083
- Milk preservation**, lactoperoxidase system, microbial contamination, techniques, assessment, comparisons 2081
- Milk processing**, waste water, biological treatment, anaerobic digesters, supports, sepiolite, kinetics 1380
- Milk products**
 - coliform bacteria, techniques, detection, rapid methods 2094
 - contamination, *Escherichia coli*, resistance, antibiotics, Iran 2996
 - Escherichia coli*, reviews 170
- Milk quality**, microbial contamination, Pakistan 163
- Mine tailings**, oils, naphthenic acids, biodegradation, microorganisms, Canada, Alberta 1488
- Mineral oils**
 - biodegradation
 - polluted soils
 - microorganisms
 - ketones, production 1509
 - organic acids, production 1509
 - waste water, heavy metals, bioremediation, Mexico 3216
- Mineral waters**
 - bacterial count, Spain 862
 - contamination, microbial flora, characterization 24
 - microbial contamination
 - Enterobacter cloacae*, survival 858
 - Escherichia coli*, survival 858
 - Klebsiella pneumoniae*, survival 858
 - Pseudomonas aeruginosa*, survival 858
 - Pseudomonas*, taxonomy 1912
- Mineralization**, activated sludge, measurement 3327
- Minerals**
 - arsenopyrite, oxidation, arsenic, production, *Thiobacillus ferrooxidans* 2613
 - biodegradation
 - bacteria
 - iron
 - oxidation, reviews 3791
 - reduction, reviews 3791
 - formation, *Synechococcus* 1113

Mining

- mine spoil, bioremediation, Australia 3217
- mine tailings, bioremediation, Australia 3217
- mined land, bioremediation, Australia 3217
- Mining wastes**, sulfate reducing bacteria, techniques, characterization, DNA probes 311
- Models**
 - Bacillus stearothermophilus*, spores, heat resistance 249
 - bacteria, growth, kinetics 3116
 - biofilms, tortuosity, diffusivity 330
 - chlorophenols, biodegradation, *Phanerochaete chrysosporium* 2556
 - coliform bacteria, concentration, rivers 1077
 - evaluation, hydrocarbons, biodegradation, polluted soils, bioremediation 3225
 - formate, biodegradation, biofilms, anaerobic conditions, kinetics 3538
 - groundwater, geological sedimentation, bacteria, transport 3850
 - kinetics, pentachlorophenol, biodegradation, *Flavobacterium* 1560
 - liquids, nonaqueous, biodegradation, soil 2512
 - Listeria monocytogenes*
 - growth 23
 - survival, controlled atmospheres, oxygen 3104
 - meat, microbial contamination, control, lactic acid 1056
 - meat products, microbial contamination, *Salmonella typhimurium* 2849
 - naphthalene, sorption, soil, *Pseudomonas fluorescens* 3461
 - oligosaccharides, hydrolysis, *Trichoderma longibrachiatum*, cellobiohydrolases 548
 - olive oil, production, waste water treatment, activated sludge 696
 - pentachlorophenol
 - biodegradation
 - Flavobacterium*
 - 2,4-dichlorophenol, effects 3476
 - p-cresol, effects 3476
 - petroleum hydrocarbons, biodegradation, soil, soil flora 3238
 - phenol, biodegradation, bacteria, growth 3580
 - pollution, petroleum hydrocarbons, soil, bioremediation 3238
 - rotating biological contactors, design, optimization 442
 - sewage, quality, waste water treatment, plant, performance 3256
 - Staphylococcus aureus*, foods, phosphates, antimicrobial properties 1043
 - sulfate reducing bacteria
 - methanogens
 - interactions
 - hydrogen sulfide 2709
 - pH 2709
 - sulfates, transport processes, mass flow, methanogenic bacteria, sulfate reducing bacteria, competition 669
 - tomato juice
 - contamination
 - Aspergillus*, growth 94
 - Clostridium sporogenes*, growth 94
 - transport processes, bacteria, porous media 789
 - trichloroethylene, biodegradation, *Methylosinus trichosporium*, bioreactors 3565
 - waste water
 - biodegradation, anaerobic digestion 1377
 - phosphorus, removal, anaerobic conditions 686
 - waste water treatment
 - activated sludge, oxygen transport 1296
 - denitrification, *Pseudomonas denitrificans*, bioreactors 2624

Models cont.

- waste water treatment cont.
 - performance, reviews 1179
 - ponds 1373
- whey, utilization, ethanol production, *Candida pseudotropicalis*, kinetics 473
- Modified atmosphere packaging**, bakery products, plastic film, *Staphylococcus aureus*, enterotoxins, Italy 1983
- Modified atmosphere storage**
 - beef
 - Aeromonas hydrophila*, growth 960
 - bacterial count 965
 - Enterobacteriaceae, differentiation, culture media 52
 - keeping quality, Italy 2976
 - Listeria monocytogenes*, growth 960
 - Pseudomonas*, differentiation, culture media 52
 - Yersinia enterocolitica*, growth 960
 - cabbages, *Listeria innocua*, control 2009
 - chlorine, fish, microbial contamination 121
 - cottage cheese, microbial flora 182
 - fish, packaging, microbial contamination, control 947
 - foods, carbon dioxide, reviews 1925
 - groundnuts, *Aspergillus parasiticus*, aflatoxins, control 909
 - lamb (meat)
 - Pseudomonas fluorescens*, growth 2053
 - Pseudomonas fragi*, growth 2053
 - Pseudomonas lundensis*, growth 2053
 - nisin, pigmeat, *Listeria monocytogenes*, control 138
 - packaging
 - lamb (meat)
 - Listeria monocytogenes*, growth 2982
 - Yersinia enterocolitica*, growth 2981
 - pigmeat
 - bacteria, keeping quality 978
 - Listeria monocytogenes*, survival 2049
 - microbial flora 141
 - Yersinia enterocolitica*, survival 2049
 - poultry meat, bacteria, spoilage 154
 - turkey meat, *Listeria monocytogenes*, survival 2073
- Modified atmosphere storage+nisin**
 - pigmeat
 - Listeria monocytogenes*, growth, inhibition 973
 - Pseudomonas fragi*, growth, inhibition 973
- Molasses**
 - biodegradation
 - biomass production, yeasts 711
 - Enterobacter aerogenes*, hydrogen, production 717
 - ethanol production, inhibition, *Saccharomyces*, supplements, control 478
 - fermentation
 - fish scrap
 - lactic acid bacteria 759
 - yeasts 759
 - silage additives
 - silage making
 - crab waste 758
 - wheat straw 758
 - silage making
 - pig manure + wheat straw
 - fermentation
 - inoculation
 - Lactobacillus plantarum* 760
 - Streptococcus faecalis* 760
 - storage decay 85
 - utilization
 - microorganisms, biosurfactants, production 2377
 - Propionibacterium acidipropionici* propionic acid, production 479
 - vitamins, production 479
 - Saccharomyces cerevisiae*, invertase, production 2381
 - waste water, fermentation, monitoring, methodology 1223

Molasses *cont.*

yeasts, isolation, identification, Mexico 3129

Molasses distillers' solubles, biodegradation, anaerobic treatment, bioreactors, Czech Republic 1679

Molybdenum, bacterial leaching, *Thiobacillus ferrooxidans*, surfactants 1753

Monascus anka

food wastes

soyabeans, α -galactosidase, production 2360
sugarcane, α -galactosidase, production 2360

Monochlorohydrin, isomers, biodegradation, *Pseudomonas*, isomers, production 465

Monochlorophenols, biodegradation, biological fixed-film systems 2550

Monoclonal antibodies, detection, flow cytometry, *Salmonella*, serotypes 1859

Monocotyledons

phenols

biodegradation
rhizosphere 3627
soil 3627

Monolaurin

crayfish, *Listeria monocytogenes*, control, packaging 2026

stainless steel, *Listeria monocytogenes*, biofilms, control 2163

Montmorillonite-polycrylamide, suspensions, naphthalene, biodegradation, *Pseudomonas cepacia*, kinetics 2443

Monuments

biodegradation

algae, ecology 3016
cyanobacteria, ecology 3016
fungi 2112

Moraxella, *p*-hydroxybenzoate, biodegradation, enzymes, properties 3447

Morcella elata, soyabeans, wastes, biomass production 2373

Moringa oleifera, potable water, water hardness, reduction 1751

Morocco

beef, *Yersinia enterocolitica* 2032

beet sugar, waste water, biological treatment, lagoons 714

chicken meat, *Yersinia enterocolitica* 2032

faecal coliforms

dynamics

ponds

pH, effects 3169
solar radiation, effects 3169
temperature, effects 3169

mussels, contamination, bacteria 2957

pigmeat, *Yersinia enterocolitica* 2032

sewage

biological treatment, ponds, algae, performance, climate, effects 416

ponds, *Salmonella*, antibiotics, resistance 3162

shellfish, contamination, polioviruses, detection, comparisons 2786

Vibrio cholerae

dynamics

ponds

pH, effects 3169
solar radiation, effects 3169
temperature, effects 3169

waste water

anaerobic treatment, lagoons, biological filtration, sand 2273

biological treatment, aquatic plants 1362

Morpholine, biodegradation, *Mycobacterium aurum* 522

Mortar

archaeological material

biodegradation

lichens, Spain 196

mosses, Spain 196

microbial corrosion, techniques, analysis, comparisons, Spain 1909

Mosses, mortar, archaeological material, biodegradation, Spain 196

Motor cars, production, waste treatment, reviews 1756

Moulds

beef, contamination 133

butter, fatty acids 2086

cheeses, determination, Spain 2088

control

agar, fruit, vanillin 3055

bread, spoilage 1980

meat production, coatings, fungicides 2150

semolina, irradiation, storage life, extension, India 1037

tomatoes, garlic, extracts, antifungal properties 2169

cultures, protection, sausages 2174

foods

detection, immunoassay, reviews 1929

microbial contamination 1927

growth

characterization, orange juice 2944
control, refuse, disposal 2361

Italy, sausages, fermentation, yeasts 2060
walnuts, contamination, gamma radiation, control 2938

wheat, water content, spoilage, Tropics 1976

wines, cork, chlorophenol, transformation 2999

wood panels, biodeterioration 2101

MS-2 coliphage, inactivation, synergism, water purification, disinfection, chloramine, cupric chloride 1746

Mucilages

pathogens, pollution, Adriatic Sea 1874

sea water

pollution

algae, Italy 1131

diatoms, Italy 1131

Mucor miehei

poultry fat, hydrolysis 2681

tallow, hydrolysis 2681

Musca domestica, larvae, pig slurry, biodegradation, feeds, production 2375

Museum specimens

feathers, biodeterioration, Keratinophilic fungi, India 195

leather, biodeterioration, Keratinophilic fungi, India 195

Mushroom compost

acid mine drainage, treatment 412

fermentation, *Aspergillus candidus*, feeds, production 3377

polluted soils, pesticides, bioremediation 3243

production

poultry manure, biodegradation, temperature, nitrogen 1238

reviews 350

straw

biodegradation, temperature, nitrogen 1238

poultry manure polysaccharides, addition, microbial activities, effects 1243

wheat straw, animal manures, composting, mathematical models 1242

Mushroom composts, production, management 2294

Mushroom houses

timbers

biodeterioration

bacteria, Poland 3002

wood destroying fungi, Poland 3002

wood preservatives, efficiency 3003

Mushrooms

brine, *Clostridium sporogenes*, spores, heat resistance, determination 2948

canned products, brine, acidification, *Bacillus stearothermophilus*, spores, heat resistance, control 925

Mussels

contamination

bacteria, Morocco 2957

dinoflagellates, toxins 943

polioviruses, Morocco, detection, comparisons 2786

processing, wastes, gibberellic acid, production, *Gibberella fujikuroi* 3386

Mussels *cont.*

toxins, monitoring, Adriatic Sea 2014

Vibrio mytili, new species 1107

Mycobacterium

polycyclic hydrocarbons, soil,

bioremediation 2264

sterols, fermentation, steroids, production 1412

trichloroethylene, biodegradation 2719

wastes, gases, ethene, removal 2516

Mycobacterium aurum

morpholine, biodegradation 522

poly(vinyl chloride), biodegradation, substrates, oxygen, effects 3607

Mycobacterium chlorophenolicum, nutrient requirements, pentachlorophenol, biodegradation 1521

Mycobacterium fortuitum, polychlorophenols, biodegradation, characterization, identification 3422

Mycobacterium smegmatis

actinides, absorption, biochemistry, kinetics 3690

lanthanides, absorption, biochemistry, kinetics 3690

Mycobacterium tuberculosis, milk, reviews 172

Mycobacterium vaccae

aromatic hydrocarbons, biodegradation, groundwater, pollution 3496

organochlorine compounds, biodegradation, groundwater, pollution 3496

polycyclic hydrocarbons, biodegradation, groundwater, pollution 3496

propane monooxygenase, chlorinated hydrocarbons, biodegradation 1518

soil, organic compounds, biodegradation, metabolites, toxicity 574

Mycotoxins

aflatoxin

biodegradation, *Flavobacterium aurantiacum* 66

production

control, *Aspergillus flavus*, essential oils 65

gene identification 2929

aflatoxins

almonds, determination 1959

Aspergillus flavus, groundnuts, Israel 86

biosynthesis, *Aspergillus flavus*, genes, gene expression 2858

Brazil nuts, determination 1959

control

groundnuts

Aspergillus parasiticus
modified atmosphere storage 909

packaging 909

cotton, contamination, *Aspergillus flavus*, Slovakia 1011

dried milk, contamination 174

feeds, poultry, contamination, detection 71

foods, Pakistan 1965

fungi, contamination, poultry manure, feeds, production 70

groundnuts

determination 1959

products

Aspergillus flavus 910

Aspergillus parasiticus 910

leaching, soil 68

maize

contamination 80

determination 1959

storage, microbial contamination, *Aspergillus*, Brazil 2934

milk, determination, thin layer chromatography 173

pistachios, determination 1959

production

Aspergillus parasiticus, genetics 1962

cheeses, *Aspergillus flavus* 706

control

Aspergillus parasiticus, food preservatives 64

groundnuts, *Aspergillus flavus*, sodium chloride 2939

Mycotoxins cont.

aflatoxins cont.

production cont.

control cont.

maize, *Aspergillus flavus*,
plant oils 63groundnuts, gypsum, *Aspergillus*
parasiticus 87

maize

fungi, Nigeria 79

kernels, *Aspergillus flavus*
1974whey, *Aspergillus flavus* 706removal, *Flavobacterium aurantiacum*
1964smoked fish, contamination, Sierra
Leone 124*Aspergillus fumigatus*, composting, health
hazards 2308

cigarettes, fungi, Egypt 912

citrinin, flours, wheat flour, detection
2926

feeds

contamination

Africa 62

Asia 62

South America 62

foods

contamination

Africa 62

Asia 62

South America 62

reviews 1960

fumonisin, production, maize, moisture
content, *Fusarium moniliforme*
1975

fumonisins

animal manures, detection 895

cereal products

contamination, Italy 904

detection 895

feeds, maize, contamination, reviews,
USA 896foods, maize, contamination, reviews,
USA 896heat stability, maize, determination
2930

maize

contamination, Italy 904

detection 895

determination, liquid chromatogra-
phy 78processes foods, *Fusarium*, Spain
2950

milk

detection

ELISA 175

liquid chromatography 175

production, cereals, *Fusarium*, Spain
1973

fusarochromanone

maize, detection, liquid chromatogra-
phy 75wheat, detection, liquid chromatogra-
phy 75hepatotoxins, biodegradation, water, cya-
nobacteria 2923isolation, cassava, *Penicillium ver-*
rucosum, Burundi 61nuts, contamination, determination, thin
layer chromatography 88ochratoxin-A, production, feeds, *Asper-*
gillus niger 2927

ochratoxins, biodegradation,

Acinetobacter calcoaceticus 67

patulin

detection, polyclonal antibodies 1966

grape juice, *Penicillium expansum* 97*Pichia farinosa*, characterization 2928

production

Aspergillus ochraceus 2925

control

oilseed cakes, contamination,

fungi 2924

oilseed plants, contamination,

fungi 2924

satratoxins, production, air filters, con-
tamination, *Stachybotrys atra* 204

trichothecenes

bioassays, yeasts, optimization 894

foods, monitoring 1961

Mycotoxins cont.

zearalenone, maize, contamination 80

Myrothecium verrucaria, enzymes, cellulase,

production, detection, SDS-PAGE 1785

Mytilus edulis, biofouling, antifoulingagents, production, *Dendronephthya*,

control 221

Naphthalene

biodegradation

Arthrobacter, solubility, chemical
properties 3560

groundwater, Australia 3222

methanotrophic microorganisms,

polyhydroxybutyrate 2449

microorganisms, surfactants, effects
3508

polluted soils, bioremediation 530

Pseudomonas, mathematical models
573*Pseudomonas cepacia*, montmoril-
lonite+polyacryamide, suspen-
sions, kinetics 2443*Pseudomonas fluorescens*naphthalene dioxygenase, photome-
try 1855

salicylic acids, production 568

Pseudomonas putida, genetics, bio-
chemical pathways 3564*Pseudomonas stutzeri*, strains, bio-
chemical pathways, genetics,
comparisons 3555

soil 1163

bacteria, luminescence 2532

sorption, soil, *Pseudomonas fluorescens*,
models 3461**Naphthenic acids**, biodegradation, microor-
ganisms, oils, mine tailings, Canada,
Alberta 1488**1-Naphthoic acid**, biodegradation,
Pseudomonas maltophilia, metabolism,
characterization 2448**Naphthylamine**, biodegradation, microor-
ganisms, activated sludge 566**Nappies**

composts, microbial contamination 1240

disposal, landfills, viruses, persistence
1071**Naphthalenesulfonic acid**, biodegradation,
microorganisms, immobilization, sand,
waste water, inorganic salts 3427**Natural gas**biodegradation, microbial flora, growth
1497sulfur, removal, *Thiobacillus ferroox-*
idans 3547*Navicula subinflata*, marine fouling,
polysaccharides, production, chemistry
3042*Neisseria*, identification, enzyme immunoas-
say 257**Nematoda**eggs, viability, sewage sludge, biological
treatment 3166occurrence, vegetables, irrigation, waste
water, techniques 3372**Neocallimastix frontalis + Penicillium***pinophilum*, cellulose, biodegradation,
enzymes, synergism 1460**Neosartorya fischeri**, pineapple juice, heat
resistance 96**Netherlands**activated sludge, foaming, *Microthrix*
parvicella 1319concrete, corrosion, biological filtration,
sewerage 3017

food

contamination

Campylobacter 7*Salmonella* 7*Microcystis*, blooms, lakes, control,
destratification, mixing 3105nitrogen, removal, sewage, biological
treatment, upgrading, computer sim-
ulation 1776

nutrients

removal

sewage, biological treatment 3702

waste water, biological treatment
3700odour abatement, biological filtration,
sewerage 3017**Netherlands cont.**phosphorus, removal, waste water, bio-
logical treatment 3750pig manure, biological treatment, biogas,
production 2687sediment, contamination, organic com-
pounds, bioremediation 3211sewage + poultry, abattoirs, effluents,
biological treatment,*Campylobacter*, contamination,
surveys 292**New Zealand**algal blooms, toxins, shellfish, poisoning
2220

dairy effluent

biological treatment, wetlands, con-
structed, *Schoenoplectus validus*
1340

denitrification, wetlands 1367

dairy waste water, biological treatment,
wetlands, artificial 3763-3764flood control, pumps, fouling, *Ficopo-*
matus enigmaticus 2135*Macruronus novaezelandiae*, spoilage,
bacterial count 2968meat production, waste water, denitrifica-
tion, wetlands 1367nitrates, removal, aquatic plants, wetlands
1345poultry manure, amendments, composting
1770pulp mill effluent, organic halogen com-
pounds, removal, biological treat-
ment, lagoons, aeration 1704resin acids, biodegradation, pulp mill
effluent, lagoons 1700**Newspapers**, biodegradation, landfills, bacte-
ria 455**Nicaragua**, sewage, bacteriophages, detec-
tion, *Escherichia coli* 767**Nickel***Desulfotomaculum*, resistance 3656electroplating waste water, starch,
biodegradation, anaerobes, methane
inhibitors 1221metabolism, *Azotobacter chroococcum*,
genetics 642

sorption

algae, marine environment 2590

fungi, biomass 3665

Thiothrix 2585uptake, *Eichhornia crassipes*, rivers,
Zimbabwe 2587**Nickel ore**

microbial leaching

Aspergillus 1418*Penicillium* 1418**Nickel sulfide**, oxidation, *Thiobacillus fer-*
rooxidans 2712**Nigeria**beverages, microbial contamination,
determination 916cereal products, contamination, aflatoxins
903coal, biodegradation, *Phanerochaete*
chrysosporium 519fertilizer industry, waste water, microor-
ganisms 2577fish ponds, microbial contamination, sea-
sons, effects 9

foods, toxinogenic fungi, storage 269

fuel oils, biodegradation, microorganisms,
estuaries, microcosms, filters 3571

maize, fungi, aflatoxins, production 79

refuse, composting 355

rock phosphate, utilization, Actino-
mycetales, isolation, worm casts
692slaughterhouse waste, discharge, rivers,
microbial contamination 3143

yeasts, beverages 91

Night soil, biological treatment, aerobic con-
ditions, nitrogen, biodegradation,
nitrous oxide, emission, Japan 762**Nisin**cheeses, production, *Listeria mono-*
cytogenes, inhibition 2089crumpets, *Bacillus cereus*, toxins, pro-
duction, control 2155effects, *Listeria monocytogenes*, control,
temperature 3082

- Nisin** *cont.*
 modified atmosphere storage, pigmeat, *Listeria monocytogenes*, control 138
 production, meat, fermentation, *Lactococcus lactis* 2171
 resistance, *Listeria monocytogenes* 2207
 sprays
 beef
 carcasses
 Brochothrix thermosphacta, control 967
 Carnobacterium divergens, control 967
 Listeria innocua, control 967
- Nisin+EDTA**, *Pseudomonas fluorescens*, control 2166
- Nitrates**
 carbon tetrachloride, biodegradation, microorganisms 526
 chlorinated phenols, biodegradation, microorganisms, sediment 3596
 reduction
 hydrocarbons, biodegradation, microorganisms 2529
 Pyrobaculum aerophilum, sea water, boiling, Italy 3864
 removal
 activated sludge, mathematical models 1611
 aquatic plants, wetlands, New Zealand 1345
 brine, wastes, bacteria, immobilization 3720
 drinking water, biological treatment, fluidized beds, Germany 1743
 groundwater, bacteria, USA 3719
 Phormidium uncinatum, methodology 681
 sewage, *Acinetobacter*, reviews 3707
 sewerage, hydrogen sulfide, production, control 3057
 utilization, Enterobacteriaceae, enzymes, synthesis, regulation, genetics 1795
- Nitrates (esters)**, biodegradation, microorganisms, reviews 2434
- Nitric oxide**, reduction, bacteria 2741
- Nitrification**
 activated sludge 2632
 activated sludge, control, electrodes 2256
 measurement 3327
 oxygen, uptake 2333
 performance, monitoring, fluorescence 684
 population dynamics 1650
 biofilms
 aerobic treatment, bacteria, predation 1654
 bioreactors, population dynamics 1631
 population dynamics 1650
 rotating biological contactors, phosphorus, effects 1391
 biological filtration, aeration 1615
 biological fixed-film systems 1616
 biofilms, growth, dynamics 1655
 oxygen, inhibition 1618
 biological treatment
 effluents, recirculation, ponds + lagoons, aeration 3716
 filters, submerged 1264
 organic matter, substrates, production, bacteria 3729
 bioreactors
 Nitrobacter agilis, immobilization, activity, temperature 3832
 Nitrosomonas europaea, immobilization, activity, temperature 3832
 characterization, activated sludge, waste water treatment, design, upgrading, Denmark 678
 coke, production, effluents, biological treatment, ammonia, effects 1628
 denitrification
 activated sludge
 aerobic treatment, anaerobic treatment, USA 1653
 bulking, *Zoogloea*, growth 1324
 biological filtration, filters, submerged, microbial flora 3698
- Nitrification** *cont.*
 denitrification *cont.*
 control, waste water treatment, computer simulation, Germany 339
 industrial wastes, waste water, activated sludge, mathematical models 1635
 organic compounds, waste water, synthetic, rotating biological contactors 1393
 sewage
 biological filtration, kinetics 1634
 rotating biological contactors 1393
 anaerobic treatment, aerobic treatment, Japan 2358
 dynamics, bioreactors, mathematical models 2623
 in vitro
 ammonium, fungi + yeasts 3721
 urea, fungi + yeasts 3721
 inhibition
 polluted water, creosote 3145
 sewage, biological treatment, toxic substances, Denmark 1629
 kinetics, activated sludge, supports, plastics, biomass, growth 1310
 Nitrobacter, reviews 1647
 Nitrosomonas
 reviews 1647
 waste water treatment 2633
 phosphorus, removal, activated sludge, acetate, hydrolysate, substrates 3711
 pig manure, activated sludge+molasses 1764
 rivers, Jordan, mathematical models 1656
 sewage
 activated sludge
 dynamic models, temperature 685
 foaming, UK 3328
 biological filtration 1266
 biological treatment, reviews 1643
 treatment, biological filtration, UK 380
 waste water treatment,
 bioreactors+biofilms, Norway 2276
 sewage sludge
 liquors, biological treatment, ammonia, effects 1637
 techniques, determination 1781
 slaughterhouse waste, biological treatment, activated sludge, chemical oxygen demand, removal 3816
 suspended solids, removal, activated sludge, biological filtration 3305
 tannery waste, biological fixed-film systems, inhibition 3739
 textile industry, waste water, biological fixed-film systems, inhibition 3739
 waste water
 activated sludge, mathematical models 1642
 biological filtration, filters, design 1645
 biological treatment, reviews 1646
 lagoons
 algae 1622
 bacteria 1622
 nitrous oxide, production 3737
 waste water treatment
 bacteria, immobilization dynamic models 3725
 bioreactors, performance 1624
 heterotrophic microorganisms 3718
 microorganisms, metabolism, monitoring, gas production 3723
- Nitrification + denitrification**
 phosphorus, removal, activated sludge, Italy 3744-3745
 sludges, waste water, nitrogen, removal 3731
- Nitrifying bacteria**
 dynamics, biofilms, biological filtration 1617
 immobilization, polymers, pellets, nitrogen, removal, waste water, Japan 3730
- Nitriles**
 biodegradation
 Agrobacterium, isolation, soil 531
- Nitriles** *cont.*
 biodegradation *cont.*
 Pseudomonas putida 1601
- Nitrolitric acid**
 biodegradation
 Chelatobacter, taxonomy 3421
 Chelatococcus, taxonomy 3421
 septic tanks, Canada, Ontario 1433
 biomass, decontamination, heavy metals, extraction 3657
 phosphorus, removal, activated sludge 2636
 Pseudomonas fluorescens, decontamination, heavy metals, extraction 3657
- Nitrite**
 accumulation, waste water treatment, denitrification, heterotrophic microorganisms 2625
 concentration, biological filtration, effluents, biofilms, nitrification, efficiency 3303
 effects, *Listeria monocytogenes*, control, macrophages, bactericidal properties 2840
 production, *Flexibacter canadensis*, evaluation 3728
 removal, water purification, *Chlamydomonas reinhardtii*, bioreactors 2630
- Nitrites**
 meat products, *Listeria monocytogenes*, survival 980
 reduction, *Paracoccus denitrificans*, enzymes, nitrite reductases, genetics 1796
 utilization, Enterobacteriaceae, enzymes, synthesis, regulation, genetics 1795
- Nitrobacter**
 inhibition, ammonia 1625
 nitrification, reviews 1647
 waste water, characterization, ELISA, Sweden 1816
- Nitrobacter agilis**, immobilization, activity, nitrification, bioreactors, temperature 3832
- Nitrobenzene**
 biodegradation
 Pseudomonas pseudoalcaligenes, enzymes, characterization 3248
 waste water, aerobic treatment+acid treatment 1427
- 3-Nitrobenzenesulfonate**, biodegradation, filters, activated sludge, textile industry, waste water treatment, inoculation 1740
- 3-Nitrofluoranthene**, biodegradation, *Cunninghamella elegans* 1495
- Nitrogen**
 biodegradation
 nitrous oxide
 emission
 night soil, biological treatment, aerobic conditions, Japan 762
 septic tanks, sludges, biological treatment, aerobic conditions, Japan 762
 carbon, removal, sewage, biological treatment, fluidized beds, aerobic treatment, anaerobic treatment 1184
 cycling, sewage, treatment, hydroponics, *Phragmites australis*, rhizomes, biofilms 1333
 effects
 algal blooms, *Aureococcus anophagefferens*, USA 3152
 bacterial toxins, production, *Alexandrium minimum* 2218
 inhibition, carbon tetrachloride, biodegradation, microorganisms, kinetics 3415
 mass balances, activated sludge 403
 measurement, mathematical models, activated sludge, control, computer simulation 1285
 metabolism, *Streptomyces filamentosus* + *Chlorella saccharophylla* 3717
 pollution, trichloroethylene, groundwater, bioremediation, phosphorus, USA 2263
 reduction, waste water, biological treatment, wetlands, artificial 3339

Nitrogen cont.

- removal
 - activated sludge
 - anaerobic conditions, aerobic conditions, control 2330
 - bacteria, yeasts, injection 1636
 - control, Denmark 2620
 - mathematical models 682
 - activated sludge + bioreactors, moving bed 1638
 - biological filtration, sand, Sweden 1603
 - bioreactors, waste water treatment 1644
 - sewage
 - biological treatment
 - Netherlands 3702
 - upgrading, computer simulation, Netherlands 1776
 - bioreactors 2626
 - aerobic treatment, anerobic treatment, USA 2627
 - Denmark, kinetics 1641
 - effluents, biological treatment, design 1652
 - industrial wastes, activated sludge, upgrading, Slovenia 1640
 - Israel 3709
 - wetlands 1368
 - sewage sludge, drying, gases, activated sludge, polyethylene glycol, pellets 1630
 - slaughterhouse waste, biological treatment, activated sludge, mathematical models 1782
 - sludges, waste water, nitrification + denitrification 3731
 - textile industry, effluents, biological treatment, design 1652
 - waste water
 - activated sludge
 - biological filtration 3699
 - reviews 1298
 - Anabaena*, mathematical models 674
 - biological treatment
 - activated sludge, control, redox potential 617
 - Netherlands 3700-3701
 - bioreactors, aerobic treatment, anerobic treatment, USA 2627
 - books 1278, 1298, 1646-1648, 1867
 - nitrifying bacteria, immobilization, polymers, pellets, Japan 3730
 - waste water treatment
 - biological filtration 3726
 - methanol
 - addition
 - UK 3727
 - USA 3727
 - biological treatment, Sweden 2618
 - bioreactors+biofilms 2629
 - uptake, sewage, *Botryococcus braunii*, growth 1839
 - waste water treatment, activated sludge, efficiency, Iraq 2325
- Nitrogen fixation**, *Chlorobium tepidum* 782
- P-nitrophenol**, biodegradation, actinomycetales, starvation, effects 3597
- Nitrophenols**
- biodegradation
 - bacteria
 - mathematical models 2557
 - phosphorus, rivers, Egypt 1563
 - soil, determination 1150
 - Rhodobacter capsulatus*, reductases, inactivation, blue light 2723
 - removal, waste water, anaerobic treatment, toxicity 599
- Nitrosococcus**, fish culture, waste water, ammonia, oxidation 795
- Nitrosomonas**
- denitrification, waste water treatment 2633
 - new species, sewage, treatment, biofilms, aerobic conditions 3862
- nitrification
- reviews 1647

Nitrosomonas cont.

- nitrification cont.
 - waste water treatment 2633
 - waste water, characterization, ELISA, Sweden 1816
- Nitrosomonas europaea**
- detection, immunoassays 3878
 - immobilization, activity, nitrification, bioreactors, temperature 3832
- Nitrosomonas europaea**, trichloroethylene, biodegradation, enzymes, kinetics, mathematical models 2456
- Nitrotoluene**
- biodegradation, bioreactors, aerobes 3450
 - catabolism, biochemical pathways, *Pseudomonas* 2435
- Nitrous oxide**
- emission
 - nitrogen
 - biodegradation
 - night soil, biological treatment, aerobic conditions, Japan 762
 - septic tanks, sludges, biological treatment, aerobic conditions, Japan 762
 - piggery effluent, biological treatment, activated sludge 3808
 - waste water treatment, activated sludge 3329
 - production
 - denitrification, activated sludge, mathematical models 3736
 - nitrification, waste water 3737
- Nocardia**
- activated sludge
 - activation, foaming, identification 1300
 - techniques, estimation, immunofluorescence 1317
 - anaerobic digestion, techniques, estimation, immunofluorescence 1317
 - sulfonamides, biodegradation 500
- Nocardia amarae**
- fatty acids, utilization, kinetics 2407
 - hydrocarbons, utilization, kinetics 2407
- Nocardia autotrophica**, ferulic acid, biodegradation, soil 2748
- Nocardia pinensis**, morphology, variation, activated sludge, Australia 395
- Nocardioides simplex**
- 2,4-D, biodegradation 1561, 3618
 - 2,4,5-T, biodegradation 3618
- Nonionic surfactants**
- biodegradation
 - aquatic environment 2579
 - textile industry, wastewaters, *Candida maltosa* 3579
- North America**
- acid mine drainage, sulfides, microbial leaching 3792
 - foodborne diseases, trends, reviews 1873
 - hazardous wastes, disposal to land 364
 - plant residues, domestic gardens, bacterial count 3195
 - sewage sludge, disposal to land 364
 - sludge disposal, books 835
 - vermicomposting
 - industrial wastes 1252
 - refuse 1252
 - waste water treatment
 - books 835
 - small communities, operation 328
 - water pollution, books 835
 - water supply, books 835
 - waterborne diseases
 - swimming
 - control
 - legislation 280
 - microbiology, standards 280
- North Sea**, sulfates, reduction, *Desulfacinum infernum*, new species 2713
- Northern Ireland**, phosphorus, sewage, eutrophication, lakes 1129
- Northwest pacific**, coastal areas, nutrients, rainfall, algae, blooms, effects 1132
- Norway**
- agricultural wastes, refuse, recycling, biological treatment 3358
 - dairy wastes, biological treatment 2643

Norway cont.

- salmon, processing, microbial contamination, *Listeria monocytogenes* 2954
- sewage
- biological treatment, bioreactors, biofilms 1173
 - waste water treatment, nitrification, bioreactors+biofilms 2276
- sewage sludge, aerobic treatment 2280
- waste water, biological treatment, bioreactors, biofilms 1173
- Nostoc muscorum**
- pesticides
 - biodegradation 619
 - utilization 619
- Nuclear power stations**, cooling water, heat, utilization, nutrients, removal, *Fischerella* 2679
- Nucleotide sequences**, *Listeria*, bacteriophages, proteins, isoelectric focusing 1103
- Nutrient removal**
- activated sludge, aeration, control, redox potential 673
 - sewage, biological treatment, wetlands 1353
 - waste water
 - biological treatment
 - mathematical models 672
 - wetlands, USA 1361
- Nutrients**
- activated sludge, bulking, bacteria, growth 3316
 - discharges, control, pulp and paper industry, waste water, activated sludge 1713
 - effects, toluene, biodegradation, soil, microorganisms 575
 - levels
 - aquatic plants, rivers 1604
 - effluent discharge, rivers 1604
 - rainfall, algae, blooms, effects, northwest pacific, coastal areas 1132
 - recycling, bacteria, mangrove swamps, tropics 1610
- removal
- activated sludge
 - bacteria 1817
 - filaments, formation, reviews 1312
 - design, upgrading, Germany 1294
 - methanol, addition, Sweden 3704
 - microbial flora 3693
 - polymers, characteristics 1614
 - settlement, Denmark 1309
 - upgrading, Australia 1609
 - biological filtration, upgrading, Germany 1275
 - bioreactors, aerobic treatment, aerobic treatment, mathematical models, optimization 683
 - nuclear power stations, cooling water, heat, utilization, *Fischerella* 2679
 - Phragmites australis*, wetlands, constructed, USA 1349
 - rivers, wetlands, constructed, Australia 1348
- sewage
- activated sludge, control, expert systems, Germany 671
 - biological filtration, aeration 1276
 - biological fixed-film systems, design 1263
 - biological treatment
 - Netherlands 3702
 - upgrading, Germany 1608
 - bioreactors
 - aerobic treatment, anerobic treatment, USA 2627
 - biomass, development 1306
 - Eichhornia crassipes*, Jamaica 3887
 - sewage effluent
 - biological treatment, wetlands, Australia 1364
 - Eichhornia crassipes*, iron, effects, Spain 1612
 - wetlands, Australia 1351
 - sewage sludge, hydrolysis, anaerobic digestion, Denmark 1606-1607

Nutrients *cont.*removal *cont.*

- sludges, hydrolysis, anaerobic digestion, Denmark 1606-1607
- techniques, control, sewage, biological treatment 2619

waste water

activated sludge

- aerobic conditions, biofilms

3326

- biological filtration 3699

- control, expert systems, Germany 671

- biological fixed-film systems, design 1263

biological treatment

- comparison, UK 3703

- Netherlands 3700

bioreactors

- aerobic treatment, anerobic treatment, USA 2627

- anaerobic treatment, fluidized beds 1232

- waste water treatment, *Scenedesmus bicellularis*, immobilization 2274

- sea water, petroleum hydrocarbons, biodegradation, Saudi Arabia 3548

- stainless steel, biofilms, formation, *Listeria monocytogenes* 2111

Nuts, contamination, mycotoxins, determination, thin layer chromatography 88**Nylon**

- biodegradation, bacteria, genes 3609

- manufacture, wastes, biodegradation, *Flavobacterium*, enzymes 3608

Oak

leaves

- phenols, biodegradation, *Sporotrichum pulverulentum* 1430

- tannins, biodegradation, *Sporotrichum pulverulentum* 1430

Oceans, sewage sludge, disposal, *Clostridium perfringens* 3363**Octadecane**, biodegradation, *Pseudomonas aeruginosa*, biosurfactants, effects 3553**Odour abatement**

- activated sludge, effluents, biological filtration 385

- agricultural wastes, composting, plastic tunnels 1258

- biological filtration, sewerage, Netherlands 3017

- manures, composting, plastic tunnels 1258

- sewage sludge, composting, USA 377

- waste water treatment, biological filtration, Germany 766

Odours

control

- scrubbing, wastes, composts 2307

- wastes, composting 2306

Offal, vacuum packaging, microbial contamination, Enterobacteriaceae, determination 2037**Oil palms**, residues + manures, composting 3281**Oil refineries**

- polluted soils, petroleum hydrocarbons, biodegradation, Italy 3569

- waste water, biological treatment, ponds, aeration 3770

Oil refinery wastes

- amines, biodegradation, activated sludge, Taiwan 1693

biodegradation

polluted soils

bioremediation

- actinomycetales, Arab countries 2502

- cyanobacteria, Arab countries 2502

- fungi, Arab countries 2502

biological treatment

- lagoons, Singapore 561

- Thiobacillus denitrificans* 3541

- pollution, bioremediation, bacteria, characterization, Germany 3209

Oil spills

- bioremediation 3206

- soil bacteria 569

Oil spills *cont.*

- Exxon Valdez, bioremediation, USA 559

- marine environment, bioremediation 3214

Oilfield water injection systems, corrosion, *Desulfobacter*, detection, DNA probes 1689**Oilfields**

equipment

corrosion

- marine environment, sulfate

- reducing bacteria 199

- sulfate reducing bacteria, morphology 200

groundwater

- iron reducing bacteria, occurrence,

- Russia 3404

- sulfate reducing bacteria, occurrence,

- Russia 3404

- machinery, microbial flora, biofilms, characterization 3895

- microbially enhanced oil recovery,

- reviews 725

- reservoirs, hydrogen sulfide, remission, sulfate reducing bacteria 726

- thermophilic bacteria, new species,

- France 3851

- Thiobacillus denitrificans*, hydrogen sulfide, oxidation, USA 3838

water

- alkanes, biodegradation, mathematical models, microorganisms, kinetics, USA 3768

- microbial flora, biofilms, characterization 3895

Oils

- Bacillus subtilis*, spores, heat resistance, kinetics 1882

- mine tailings, naphthenic acids,

- biodegradation, microorganisms,

- Canada, Alberta 1488

- production, rape, phytic acid, hydrolysis, *Aspergillus carbonarius* 1401

Oilseed cakes, contamination, fungi, mycotoxins, production, control 2924**Oilseed plants**, contamination, fungi, mycotoxins, production, control 2924**Oily waste water**, treatment, aluminium, industry, bioreactors, membranes 3802**Oleic acid**

biodegradation

- Alcaligenes* 503

- Bacillus cereus*, isolation, animal

- manures, composts 2438

- bacteria, consortia 3500

- Sphingobacterium thalpophilum*, isolation, animal manures, composts 2438

Oligosaccharides, hydrolysis, *Trichoderma longibrachiatum*, cellobiohydrolases, models 548**Olive oil**

mills

waste water

- anaerobic digestion 2342

- biological treatment, wood

- destroying fungi 3758

production

waste water

anaerobic digestion

- control, bicarbonates 1389

- kinetics 1382

- temperature, kinetics 1668

- anaerobic treatment, preliminary

- treatment, aerobic conditions,

- microorganisms, effects 700

- biological treatment

- Azotobacter chroococcum*,

- growth, Spain 2639

- bioreactors, aerobic conditions,

- Italy 3761

- phenols, removal, *Lentinula*

- edodes* 2536

- phenolic compounds, caffeic acid,

- biodegradation, biomass,

- kinetics 2533

- waste water treatment, activated

- sludge, models 696

waste water

- polyphenols, hydroxystyrol, purification, chromatography 587

Olive oil *cont.*waste water *cont.*

- utilization, *Azotobacter chroococcum*, polyhydroxybutyrate, production 2380

- waste water treatment, anaerobic digestion, kinetics 423

Olives

preservation

- lactic acid bacteria 108

- microbial flora 108

- preservatives, brine, *Lactobacillus plantarum*, survival 929

Onions

- shredding, storage, microbial contamination, temperature, effects 933

storage decay

- Aspergillus niger*, India, Karnataka

- 110

- control, gamma radiation +

- carbendazim 932

Ophiostoma, *Pinus contorta*, sapwood, biodeterioration 2102**Ophiostoma piceae**, *Pinus contorta*, sapwood, biodeterioration 2102**Ophiostoma ulmi**, *Pinus contorta*, sapwood, biodeterioration 2102**Orange juice**

- Bacillus cereus*, enterotoxins 95

chemical composition

fermentation

- Glucanobacter oxydans* 1999

- Saccharomyces cerevisiae* 1999

- fungi, spores, germination, temperature 2943

- moulds, growth, characterization 2944

Orange peel, biodegradation, *Khuyveromyces fragilis*, pectins, characterization 1414**Organic acids**

- beef, *Escherichia coli*, control 1040

- biodegradation, effluents, yeasts 3408

- production, mineral oils, biodegradation,

- polluted soils, microorganisms 1509

Organic carbon, biodegradation, lakes, microbial activities, nitrogen, phosphorus, effects 1124**Organic chemicals**

biodegradation

microorganisms

soil

- physicochemical properties,

- mathematical models

- 3493

- sorption, mathematical models 3493

Organic compounds

- ammonia, waste gases, biological filtration, evaluation 1271

- biodegradability, anaerobic conditions, techniques, testing 3451

biodegradation

- anaerobic conditions, techniques, classification 3452

- Antarctica 3443

- assessment, techniques, neural networks, artificial 3419

- bacteria, physiology, detection 3492

bioreactors

- biofilms, structure, mass transport,

- reviews 2284

- mathematical models, kinetics

- 2461

- bioremediation, microbial flora, selection 510

- determination, Sturm test, assessment

- 1854

- Gram negative bacteria

- biochemistry 2399

- marine sediments 2399

microorganisms

adaptation 1439

- soil, carbon dioxide, measurement

- 3495

- surfactants, reviews 2402

- Mycobacterium vaccae*, soil, metabolites, toxicity 574

- Phanerochaete chrysosporium* 3885

- sediment, microbial flora, Slovakia

- 285

- soil

- microorganisms 324

Organic compounds cont.

biodegradation cont.

soil cont.

Phanerochaete chrysosporium
3245

radiation, effects 1454

soil flora, USA 506

techniques, assessment 2247

bioremediation, techniques 3221

butanal, waste gases, biological filtration,
evaluation 1271emission, control, waste water treatment,
USA, reviews 1171inhibition, acetates, biodegradation, sedi-
ment, rivers, Germany 277lignin, biodegradation, *Pseudomonas*
fluorescens 1476*Listeria monocytogenes*, toxins, produc-
tion 2916nitrification, denitrification, waste water,
synthetic, rotating biological con-
tactors 1393non aqueous liquids, biodegradation,
enhancement, surfactants, soil 3462polluted water, mutagenicity, *Salmonella*,
toxicity 278production, fungi, immobilization, waste
water treatment 2277refractory, detection, surfactants,
sulfonates, biodegradation, biologi-
cal filtration 3645

removal

activated sludge 3464

air, contamination, biological treat-
ment, mathematical models
2235

groundwater, bioremediation 1160

paper mill sludge, bioreactors 1736

polluted soils

bioremediation

Canada 1166

USA 1166

pulp and paper industry, waste water,
biological treatment, reviews
732slaughterhouse waste, biological treat-
ment, activated sludge, mathe-
matical models 1782sewage, biological treatment, mathe-
matical models 2436toxicity, activated sludge, microorga-
nisms, mathematical models, struc-
ture activity relationships 401**Organic halogen compounds**

biodegradation 1451

pulp mill effluent, bioreactors, aero-
bic conditions 1709removal, pulp mill effluent, biological
treatment, lagoons, aeration, New
Zealand 1704**Organic matter**

biodegradation

biofilms, rivers, mathematical models
345moisture, sewage sludge, wood chips,
composting 354

refuse, composting 356

sewerage 1445

mineralization, soil, anaerobic conditions,
bacteria 529substrates, production, nitrification, bio-
logical treatment, bacteria 3729**Organic nitrogen compounds**

algae, blooms, marine environment 2232

aromatic compounds, biodegradation,
microorganisms, reviews 3480biodegradation, lignin peroxidase, modifi-
cation, kinetics 2455**Organic sulfur compounds**biodegradation, *Rhodospseudomonas*
sulfidophila, marshes 3506pulp mill effluent, anaerobic treatment,
toxicity, control 1721**Organic wastes**

composting

Austria 3293

Belgium 2300

synthetic, activated sludge, stoichiometry
397

utilization, shrimps, growth 2362

vermicomposting, reviews 3300

Organochloride compounds, biodegrada-
tion, kraft mill effluent, anaerobic
digestion 728**Organochlorine compounds**

biodegradation

microorganisms, bioremediation, soil
3494*Mycobacterium vaccae*, groundwater,
pollution 3496*Rhodococcus ruber* 1442

removal

pulp mill effluent

anaerobic treatment + ultrafiltra-
tion 2655biological treatment, biomass,
temperature 1732

sulfate pulping

effluents

Ancylobacter aquaticus 2417*Methylobacterium* 2417*Pseudomonas* 2417toxicity, methanogens, techniques, deter-
mination 3185**Organolead compounds**, biodegradation,
soil 3473**Organomercury**, biodegradation, *Bacillus*
pasteurii 1577**Organophosphonates**4-aminobutylphosphonic acid,
biodegradation, bacteria, biochemi-
cal pathways 37133-aminopropylphosphonic acid,
biodegradation, bacteria, biochemi-
cal pathways 3713**Organophosphorus pesticides**

biodegradation

soil

Bradyrhizobium, enzymes 625*Rhizobium*, enzymes 625**Organotin compounds**biodegradation, marine sediments, Japan
613

sorption

Chlorella emersonii 612*Plectonema boryanum* 612*Synechocystis* 612**Oudemansella mucida**, wood, biodegrada-
tion, oxidoreductases, production 3525**Oxidation ditches**

aeration

equipment, testing 3334

horizontal flow, effects, waste water
treatment 419

sewage

biological treatment 2337

Egypt 2338

waste water, aerobic treatment, methodol-
ogy 2335waste water treatment, mathematical
models 421**Oxygen***Bacillus licheniformis*, denitrification,
kinetics 2622

effects

activated sludge, sedimentation 1315

sulfur, oxidation, *Thiobacillus*,
bioreactors 3689sewerage, biofilms, growth, sulfates,
reduction 3356silage, *Listeria monocytogenes*, survival,
monitoring 3810

uptake

estimation, waste water treatment,
activated sludge, aeration 2324

nitrification, activated sludge 2333

xylose

utilization

ethanol production, yeasts 516

xylitol, production, yeasts 516

Oysterscontamination, polioviruses, Morocco,
detection, comparisons 2786

hepatitis A virus, isolation 948

Salmonella, detection, polymerase chain
reaction 2961*Vibrio parahaemolyticus*, survival, stor-
age, temperature 2020*Vibrio vulnificus*

control

diacetyl 2025

Oysters cont.*Vibrio vulnificus* cont.

control cont.

heat treatment, pH, thermal radia-
tion 1046

sauces 2029

interactions 937

survival, cold storage, vacuum pack-
aging 946*Vibrios*, Brazil 2024**Ozone**antimicrobial activities, drinking water
3073*Cryptosporidium parvum*, inactivation
2824pretreatment, simazine, oxidation, prod-
ucts, biodegradation 2575

sewage effluent

bacteria, control 3170

viruses, control 3170

Ozone + hydrogen peroxide

water

coliphages, inactivation 3074

hepatitis A virus, inactivation 3074

P-cresolbiodegradation, *Aspergillus fumigatus*,
biochemical pathways 3497effects, pentachlorophenol, biodegrada-
tion, *Flavobacterium*, models 3476**P-nitrophenol**, biodegradation, activated
sludge, microorganisms, characteristics
1326**Pachysolen tannophilus**

lignin, xylose, biodegradation 3388

rice straw, biodegradation, ethanol pro-
duction 2388**Packaging**

controlled atmospheres

carbon dioxide, beef, *Listeria mono-*
cytogenes, inhibition 962

pate, keeping quality 922

smoked fish, storage quality 949

crayfish

Listeria monocytogenes

control

lactic acid 2026

monolaurin 2026

groundnuts, *Aspergillus parasiticus*,
aflatoxins, control 909materials, biodegradation, estimation,
enzymes 3514microbial contamination, control, dried
egg 2993

sausages

bacteria 143

microbial flora 143

semolina, storage, spoilage 1923

Packaging materials, bottled water, bacte-
ria, interactions, Italy 2886**Paddy malt mash**, ethanol production,
Saccharomyces cerevisiae +
Zymomonas mobilis 469**Paecilomyces**, lignocellulose, biodegradation,
isolation 2488**Paint**, trybutyltin, bacteria, enzymes, inhibi-
tion 3856**Paintings**

biodeterioration, conservation, India 194

microbial corrosion, techniques, analysis,
comparisons, Spain 1909**Paints**, thickeners, biodeterioration, cellu-
lases, reviews 198**Pakistan**butter, microbial contamination, determi-
nation 176

foods, aflatoxins 1965

milk hygiene, microbial contamination
163milk quality, microbial contamination
163**Palm kernel meals**, biodegradation, fungi,
enzyme activity 2495**Palm kernel oil**, biodeterioration, fungi,
control 2941**Palm oil mill effluent**

anaerobic digestion 2289

biodegradation, methane production,
kinetics, methane production, kinet-
ics, bioreactors, microorganisms,
immobilization, saponite 1421

- Palm oil mill effluent** *cont.*
biological filtration, fluidized beds, anaerobic conditions, comparisons 2640
- Palm oils**, utilization, proteins, production, *Candida tropicalis* 457
- Papaya**, slicing, *Campylobacter jejuni*, survival 930
- Paper**
bleaching
pretreatment
enzymes 731
Phanerochaete chrysosporium 731
processing, waste water treatment, sludges, *Desulforhabdus amnigenus*, new species, isolation 3853
wastes, food wastes, composts 379
- Paper mill sludge**
activated sludge, bulking, performance, microorganisms 1735
biodegradation, *Acinetobacter calcoaceticus* 2663
organic compounds, removal, bioreactors 1736
- Paprika**, microbial contamination, *Salmonella*, Germany 1986
- Papua New Guinea**, wetlands, pollution, sewage 1343
- Para-saylene**
biodegradation
interactions
microorganisms 572
Pseudomonas 572
- Paracoccus denitrificans**
denitrification, waste water, bioreactors, cells, immobilization, determination 1627
nitrites, reduction, enzymes, nitrite reductases, genetics 1796
purine, biodegradation 513
Thiosphaera pantotropha, transfer, Gram negative bacteria 1812
- Paralytic shellfish poisoning**, bacterial toxins, detection, enzyme immunoassay 123
- Parathion-methyl**
biodegradation
soil
algae 1553
cyanobacteria 1553
- Parchment**, biodeterioration, fungi 3005
- Parthenium**, fermentation, inoculum density, methane production 2390
- Parthenium hysterophorus**, fermentation, methane production, India 2393
- Particleboards**, production, waste water, anaerobic treatment, bioreactors 3275
- Pasta**, *Clostridium botulinum*, survival, toxins, production, vacuum packaging, storage, temperature 1922
- Pasteurization**, fish products, spoilage, control, bacteria, heat resistance 2017
- Pasteurized milk**, Enterobacteriaceae, control, disinfectants, Italy 2079
- Pate**, keeping quality, packaging, controlled atmospheres 922
- Patents**, activated sludge, microbial flora, respiration, inhibition, determination 3197
- Pathogens**
animal wastes, biodegradation, anaerobic digestion, survival 290
bacteria, foods, sampling, enumeration, reviews 2921
biofilms
control, antibiotics, instruments, medical treatment, microbial contamination, evaluation 3021
growth, instruments, medical treatment, models 3022
Campylobacter jejuni, control, beef, gamma radiation 2977
cheeses, reviews 177
chickens, carcasses, Brazil 2064
chopping boards
plastics
microbial contamination
disinfection 1053
food hygiene 837
- Pathogens** *cont.*
chopping boards *cont.*
wood
microbial contamination
disinfection 1053
food hygiene 837
- control**
bacteriocins, production, fish, *Lactobacillus plantarum*, isolation 1063
chemicals, chicken meat, skin, microbial contamination 2067
Eragrostis tef, contamination, lactic acid bacteria, effects 2933
fermented foods, *Lactobacillus*, bacteriocins, production, Africa 103
foods
fatty acids 11
microbial contamination, irradiation, reviews 1036
peptides 2152
honey 1884
lactic acid bacteria, antimicrobial properties, India 229
mackerels, packaging, controlled atmosphere storage 114
meat, radiation, resistance 1875
milk, pressure treatment 3045
poultry, pressure treatment 3045
pressure 266
sodium lactate, beef 135
trisodium phosphate, beef, microbial contamination 2149
waste water, disinfection, chlorine dioxide 3163
controls, sausages, lactates 2984
cosmetics, contamination 3010
crops, contamination, irrigation, waste water, Israel 3368
Enterobacter cloacae, salads, contamination 923
Escherichia coli, control, beef, gamma radiation 2977
foodborne diseases
detection
polymerase chain reaction 30
reviews 875
food handlers, reviews, USA 2831
food hygiene, reviews, USA 2831
reviews 843
- foods**
detection 2871
emulsions, growth analysis 1880
ionizing radiation 218
- growth**
composts, sewage sludge, USA 3172
control, pigmeat, lactic acid 2979
emulsions, structure 1881
- inactivation**
wastes
aerobic treatment, temperature 2241
anaerobic treatment, temperature 2241
- inhibition**
Bifidobacterium bifidum, growth, milk 2705
variation, cereals, fermentation, Tanzania 2946
Klebsiella pneumoniae, salads, contamination 923
meat, decontamination, lactic acid 1059
microbial contamination
food, cook-chill system, Malaysia 1945
lamb (meat), reviews 2983
milk, books 238, 833
mortality, waste water, biological treatment, ponds, mathematical models, Tanzania 2336
mucilages, pollution, Adriatic Sea 1874
Proteus morganii, salads, contamination 923
- removal**
animal wastes, biogas, production, indicator species, bacteria, Denmark 1760
drinking water
disinfection, Canada 2841
- Pathogens** *cont.*
removal *cont.*
drinking water *cont.*
water purification
tablets 3071
units 3067
efficiency, sewage, biological filtration + microfiltration 3268
septic tank effluent, biological treatment, filters, peat 3308
sewage
biological filtration, UK 380
disinfection
chlorine 298
chlorine dioxide 298
lime, addition 2237
sewage sludge, freezing, thawing 291
waste water treatment, sewage sludge, USA 334
risk assessment, methodology 1897
RNA phages, indicators species, assessment 2860
Salmonella, control, beef, gamma radiation 2977
spoilage, chicken meat, carcasses, cold storage 2909
survival
brackish water, sewage, treatment, stabilization basins, pH 294
composting, temperature 3171
poultry manure, fractionation, storage 2240
rivers, water, techniques, monitoring 3148
sewage sludge, storage 1143
sludges, storage 1143
swimming pools, recovery, culture media 2856
toxins, water, immunodetection, reviews 3189
transport, groundwater, mathematical models 1118
turkeys, feathers, removal, microbial contamination 2075
water
detection
polymerase chain reaction 2861
reviews 838
- Pavlova lutheri**
growth, tributyltin chloride 665
tributyltin chloride, biodegradation 665
- Pearl millet**, silage making, stability, lactic acid bacteria + *Propionibacterium shermanii* 2689
- Pectinatus**, heat resistance, beers, spoilage 1993
- Pectinatus cerevisiiphilus**, heat resistance, beers, spoilage 1993
- Pectinatus frisingensis**
beers, spoilage, volatile fatty acids, production, mathematical models 920, 1995
heat resistance, beers, spoilage 1993
- Pediococcus acidilactici**, pediocin, production, nucleotide sequences 799
- Pediococcus pentosaceus**, beef, *Clostridium botulinum*, inhibition, temperature, effects 1060
- Pediococcus peutosaceus**, starter cultures, volatile compounds, formation, sausage, fermentation 147
- Pelobacter carbinolicus**, acetoin, biodegradation, enzymes, characterization 2746
- Penicillium**, apples, storage decay 106
- Penicillium**, characterization, liquid chromatography 3127
- Penicillium**
foods, spoilage, enumeration, agar, evaluation 3130
identification, computer techniques 2215
medium chain fatty acids, biodegradation 2558
melons, microbial contamination, control 1926
nickel ore, microbial leaching 1418
parchment, biodeterioration 3005
secondary metabolites, differentiation 1936

- Penicillium* cont.
timbers
decay
 Gloeophyllum sepiarium, control 185
 Pleurotus ostreatus, control 185
 triacylglycerols, biodegradation 2558
Penicillium aurantiogriseum, phosphates, solubilization, soil 3747
Penicillium brevicompactum, biomass, *Pinus sylvestris*, determination, ergosterol 3004
Penicillium chrysogenum
biomass, heavy metals, sorption 3665
cigarettes, mycotoxins, Egypt 912
Penicillium citrinum
coal, biodegradation 2675
demethoxybenzyl alcohol, biodegradation 2675
lignin, biodegradation 2675
Penicillium commune, characterization, liquid chromatography 3127
Penicillium expansum
control, apples, postharvest decay, calcium 928
grape juice, patulin 97
Penicillium frequentans, stonework, biodeterioration, biofilms 202
Penicillium funiculosum, cigarettes, mycotoxins, Egypt 912
Penicillium griseofulvum, proteinases, production 2421
Penicillium janthinellum, aromatic hydrocarbons, oxidation 3567
Penicillium oxalicum
plant residues, utilization, sugars, production 554
sugarcane trash, utilization, sugars, production 554
Penicillium palitans, characterization, liquid chromatography 3127
Penicillium simplicissimum, coal, solubilization, aromatic compounds, utilization 1755
Penicillium solitum, characterization, liquid chromatography 3127
Penicillium verrucosum
cassava, mycotoxins, isolation, Burundi 61
feeds, production, coffee pulp 1402
Pentachlorophenol
biodegradation
 biological fixed-film systems, rotating biological contactors, fungi 3575
 clay soils, *Arthrobacter* 596
 Deuteromycotina 3582
 Flavobacterium 616, 2547
 copper, toxicity 1523
 copper chrome arsenate, interactions 614
 2,4-dichlorophenol, effects, models 3476
 enzymes 610
 glutathione transferase, genetics 591
 models, kinetics 1560
 p-cresol, effects, models 3476
 microorganisms, polluted soils 322
 Mycobacterium chlorophenolicum, nutrient requirements 1521
 pentachlorophenol-4-monooxygenase gene expression
 Escherichia coli 781
 Flavobacterium 781
 Phanerochaete chrysosporium, bioreactors, mathematical models 3592
 polluted soils
 Phanerochaete chrysosporium 3593
 wood destroying fungi, growth, methodology 3590
 Pseudomonas aeruginosa 1531
 Rhodococcus chlorophenolicus 2543
 sand, *Arthrobacter* 596
 soil
 Lentinula edodes 615
 physicochemical properties 3591
 sorption, sludges, industrial wastes, anaerobic treatment 3588
 Pentosan, removal, sulfite pulping, *Aureobasidium pullulans*, enzymes 1722
 Peptides, foods, pathogens, control 2152
 Peptone, starch, *Phanerochaete chrysosporium*, growth, soil, temperature 1554
 Peroxidases, dips, poultry, carcasses, *Salmonella choleraesuis*, control 991
 Pesticides
 atrazine, biodegradation, lignocellulosic wastes, composting 3633
 biodegradation
 Aulosira fertilissima 619
 environmental impact, reviews 1555
 Nostoc muscorum 619
 polluted soils, bioremediation, Germany 3242
 soil, radiation, effects 1454
 polluted soils, bioremediation, mushroom compost 3243
 stored products pests, control, grain stores, farms 2932
 utilization
 Aulosira fertilissima 619
 Nostoc muscorum 619
 Petrochemical industry
 biological treatment, activated sludge, powdered activated carbon, Israel 727
 waste water
 biological treatment, reviews, Israel 1692
 hydrocarbons, biodegradation, rotating biological contactors, activated sludge, comparisons 1508
 Petroleum
 biodegradation, soil, evaluation, respirometry 3562
 fractions, control, wood, biodeterioration, stain fungi 2148
 microbial contamination, bacteria 3008
 oils, biodegradation, soil, salinity 3233
 polluted soils, bioremediation, surfactants 633
 soil, bioremediation, reviews 3540
 waste gases, biological filtration, activated carbon 2499
 Petroleum hydrocarbons
 biodegradation
 aquifers 563
 cyanobacteria, marine environment, coastal areas, Kuwait 1483
 emulsifiers, production, *Candida tropicalis* 2500
 groundwater
 Australia 3222
 mathematical models 1487
 lipids, production, *Pseudomonas aeruginosa* 2379
 polluted soils
 microbial activities 1520
 oil refineries, Italy 3569
 soil bacteria 569
 rhizosphere, soil flora 2518
 sea water, nutrients, Saudi Arabia 3548
 sediment, bacteria, USA 559
 soil
 microorganisms
 nutrients 2519
 oxygen 2519
 temperature 2519
 soil flora, models 3238
 denitrification, marine sediments, France, Mediterranean sea 495
 emulsions, biodegradation, *Bacillus subtilis*, acetoin, production 1159
 polluted soils
 bioremediation
 bioventing 3239
 reviews 3218
 pollution, bioremediation, reviews 3204
 sludges, polluted soils, bioremediation, techniques, assessment, toxicity 2267
 soil
 biodegradation, bioreactors, slurries 3232
 pollution
 bioremediation
 composts 2270
 Petroleum hydrocarbons cont.
 soil cont.
 pollution cont.
 bioremediation cont.
 models 3238
 soil pollution, bioremediation, reviews 3207
 water pollution, bioremediation, reviews 3207
 Petroleum oil, sulfur, removal, *Thiobacillus ferrooxidans* 3547
 pH
 chickens, carcasses, *Staphylococcus aureus*, control 2070
 cider
 Escherichia coli, survival 915
 microbial contamination, *Lactobacillus*, Spain 1990
 control
 biomass, growth, bioreactors, techniques, measurement 1181
 sludges, biodegradation, aerobic treatment + anaerobic digestion 2275
 effects
 faecal coliforms, dynamics, ponds, Morocco 3169
 Vibrio cholerae, dynamics, ponds, Morocco 3169
 eggs, washing, water, *Salmonella enteritidis*, control, USA 1096
 irradiation, chicken meat, *Escherichia coli*, survival 2985
 Lactobacillus curvatus, control 2136
 Listeria monocytogenes, inactivation, kinetics 1047
 meat products, *Listeria monocytogenes*, survival 980
 Salmonella enteritidis, growth, sodium chloride 2200
 sausages
 Lactobacillus
 histamine, production 1086
 tyramine, production 1086
 sulfate reducing bacteria, methanogens, interactions, models 2709
 2,4,6-trichlorophenol, biodegradation, anaerobes 2546
 Phanerochaete chrysosporium, cytology, ultraviolet spectroscopy 3898
 Phanerochaete
 ligninolytic microorganisms 3182
 veratryl alcohol, regulation, manganese, lignin peroxidase, activity 3182
 Phanerochaete chrysosporium
 acetovanillone, methylation, biochemistry 2751
 alachlor, biodegradation 624
 aromatic compounds
 biodegradation
 enzymes
 characterization 508
 purification 508
 aromatic hydrocarbons, biodegradation 1510
 atrazine, biodegradation, soil 2572
 azo compounds
 biodegradation 736
 peroxidases 1449
 barley straw, biodegradation 1480
 benomyl, biodegradation, soil 1554
 biochemistry, pollutants, environment, microbial degradation 271
 cellobiohydrolase, genetics 3872
 cellulose
 biodegradation
 cellobiose dehydrogenase, production 2759
 cellobiose hydrogenase 2482
 glucosidases, production 2759
 proteases, production 2759
 2-chlorophenol, biodegradation, lignin peroxidase 583
 chlorophenols, biodegradation, models 2556
 coal, biodegradation, Nigeria 519
 p-cresol, biodegradation 2541
 cultures, polychlorinated biphenyls, biodegradation 602

***Phanerochaete chrysosporium* cont.**

3,4-dichloroaniline, biodegradation, polymers, production, identification, hpic 3634

2,4-dichlorophenoxyacetic acid, biodegradation 3598

enzymes

cellulose, biodegradation, reviews 557

dyes, decolorization 3683

gene induction, heat shock 3883

lignin, biodegradation, reviews 557

production, temperature 1829

glyoxal oxidase, DNA, cloning 1836

growth

Australia, temperature, pH, effects 3877

soil, temperature, starch, peptone 1554

trinitrotoluene, biodegradation, bacteria, soil, antagonism 1429

hemp, pulping, waste water, decolorization, biological treatment, bioreactors 1723

immobilization

lignin peroxidase

synthesis

lignin

biodegradation

air, effects 3519

carbon-to-nitrogen

ratios, effects 3519

polystyrenes, lignin peroxidase, production 583

kraft mill effluent, toxicity, biological treatment, performance 734

lignin

biodegradation

cellulobiose hydrogenase 2482

enzymes 553

lignin peroxidase, activity 3001

proteinases 2763

lignin peroxidase, gene expression, evaluation 3132

mutants, lignin, biodegradation, enzyme activity 2756

mycelium, trichlorophenol, biodegradation 3584

organic compounds

biodegradation 3885

soil 3245

paper, bleaching, pretreatment 731

pentachlorophenol

biodegradation

bioreactors, mathematical models 3592

polluted soils 3593

phenanthrene, biodegradation, lignin peroxidase 3551

phenols, biodegradation 2541

pollutants, biodegradation, reviews 307

polluted soils, bioremediation 2260

polluted water, bioremediation 2260

polychlorinated biphenyls, biodegradation 3466

polycyclic hydrocarbons, biodegradation 3467

pretreatment, azo compounds, decolorization 3409

proteins, trichlorophenol, biodegradation 3584

surfactants, ligninase, production 634

2,4,5-trichlorophenoxyacetic acid, biodegradation 3598

wheat straw, biodegradation, gases, comparisons 1463

wood, biodegradation, oxidoreductases, production 3525

xylan

biodegradation 3874

cellulobiose hydrogenase 2482

Phanerochaete sordida

creosote, biodegradation, soil 2534

manganese peroxidase, wood pulp, biological treatment, bleaching, metals, effects 2657

polychlorinated biphenyls, biodegradation, soil 2534

Pharmaceutical products

preservatives, testing 1020

Pharmaceutical products cont.

production, waste water, biological treatment, activated sludge, pretreatment, iron, hydrogen peroxide 723

waste water

biodegradation, surface water, mathematical models 1682

biological treatment

activated sludge, sludges, disposal 1683

anaerobic conditions 1684

Phellinus igniarius, lignin, biodegradation 3517

Phellinus noxius, *Betula papyrifera*, wood chips, biodeterioration 2099

Phenanthrene

biodegradation

marine sediments

Trichosporon penicillatum, USA 2510

yeasts, USA 2510

microorganisms 1519

soil, surfactants, effects 3572

surfactants, effects 3508

Phanerochaete chrysosporium, lignin peroxidase 3551

Pseudomonas 1519, 3410

Pseudomonas stutzeri, *Pseudomonas saccharophila*, physiology, comparisons 1499

sediment, surfactants, effects 3557

soil 1163

Phenol

biodegradation

Acidiphilium cryptum

gene expression 3845

gene transfer 3845

activated sludge 3580

Alcaligenes faecalis 2540

bacteria, growth, models 3580

Candida tropicalis 2540

microorganisms

supports

activated carbon, comparisons 2702

ion exchange resins, comparisons 2702

Pseudomonas, immobilization, gels 2549

Pseudomonas aeruginosa 2539

Pseudomonas putida, DNA sequencing 2537

reviews 3580

substrates, numbers, effects, mathematical models 3586

biological treatment, fluidized beds 2554

carboxylation, bacteria 2538

Phenol + organic compounds, biodegradation, bacteria, kinetics 2394

Phenolic compounds

adsorption, *Eichhornia crassipes* 589

biodegradation

activated sludge, microbial flora,

growth, mathematical models,

kinetics 1529

aerobes

enrichment

phenol 1536

toluene 1536

Agrobacterium tumefaciens, biochemical pathways, genetics 3595

Alcaligenes faecalis 2540

Candida tropicalis 2540

enzymes, reaction products, toxicity 1535

fungi, techniques, detection 3581

peroxidases, products, toxicity,

screening 2545

pretreatment, photolysis, effects 3583

pulp and paper industry, waste water, anaerobic treatment 600

pulp mill effluent, anaerobic treatment, aerobic treatment,

bioreactors 1699

soil, *Azotobacter chroococcum*,

growth 1522

caffeic acid, biodegradation, olive oil, production, waste water, biomass,

kinetics 2533

Phenolic compounds cont.

removal, coke, production, waste waters, biological treatment, activated sludge, Poland 590

Phenols

biodegradation

activated sludge, microbial flora, growth, mathematical models,

kinetics 1529

algae

blooms

reservoirs, Russia 1532

rivers, Russia 1532

anaerobes 588

Aspergillus terreus 1525

bacteria 588

biological treatment, fluidized beds, activated sludge, inoculation 1527

determination, mass spectrometry 603

heterotrophic microorganisms 1524

oak, leaves, *Sporotrichum pulverulentum* 1430

Phanerochaete chrysosporium 2541

Pleurotus ostreatus, enzymes 542

Pseudomonas

aldehyde dehydrogenase 586

4-hydroxy-2-hetovaleate aldolase 586

rhizosphere

dicotyledons 3627

monocotyledons 3627

Rhodococcus (bacteria), immobilization, activated carbon, alginates 2535

Rhodotorula glutinis 3585

soil

dicotyledons 3627

monocotyledons 3627

waste water

Coprinus macrorrhizus, peroxidases 584

saline water, oilfields, biological treatment, bioreactors, bacteria, halophiles, USA 1694

effects, lignin, biodegradation, *Ganoderma lucidum* 2485

inhibition, benzoates, biodegradation, bioreactors, granules 2552

metabolism, *Aspergillus fumigatus* 2544

removal

chemical industry, waste water, activated sludge 601

olive oil, production, waste water, biological treatment, *Lentinula edodes* 2536

pulp mill effluent, biological treatment, bioreactors, fluidized beds 1734

waste water, enzymes + coagulants 3587

waste water, biodegradation, bioreactors, sludges, granules, characteristics, *Methanohalobium* 2551

Phenotypic stability, carbofuran,

biodegradation, soil, bacteria, techniques, isolation 1562

Phialophora, kiwifruits, storage decay 109

Philippines, shrimps, microbial contamination, reviews 939

Phlebia radiata, barley straw, biodegradation 1480

Phlebia tremellosa, alachlor, biodegradation 624

Phoma, monuments, biodeterioration 2112

Phormidium

piggery effluent

biodegradation, activated sludge 1768

biological treatment 1767

Phormidium corium, petroleum hydrocarbons, biodegradation, marine environment, coastal areas, Kuwait 1483

Phormidium uncinatum, nitrates, removal, methodology 681

Phosphate rock, solubilization, poultry manure, composting, ammonia, absorption, bark, soil 755

Phosphates

antimicrobial properties, meat products, microbial contamination, reviews 2971

Phosphates cont.

- food, *Staphylococcus aureus*, control, metals, inhibition 1044
- foods, antimicrobial properties, models, *Staphylococcus aureus* 1043
- removal
 - activated sludge
 - Acinetobacter calcoaceticus*, immobilization, growth 3748
 - Acinetobacter johnsonii*, immobilization, growth 3748
 - heavy metals, inhibition 1297
 - sewage, *Acinetobacter*, reviews 3707
 - waste water, sewage sludge, granules, anaerobic treatment 3705
- solubilization
 - bacteria, determination, plate count 818
 - fungi, determination, plate count 818
 - soil, microorganisms 3747
- uptake, activated sludge, *Acinetobacter calcoaceticus*, immobilization 3746
- waste water treatment, activated sludge, efficiency, Iraq 2325

Phosphonic acids, biodegradation, *Rhizobium*, volatile compounds, production, lyases 2411**Phosphorus**

- 2,4-D, biodegradation, bacteria, rivers, Egypt 1563
- effects, bacterial toxins, production, *Alexandrium minutum* 2218
- fixation, sludges, biological treatment 2634
- nitrophenols, biodegradation, bacteria, rivers, Egypt 1563
- pollution, trichloroethylene, groundwater, bioremediation, nitrogen, USA 2263
- reduction, waste water, biological treatment, wetlands, artificial 3339
- release, activated sludge, monitoring, electrical conductivity 3751
- removal
 - activated sludge
 - acetates, addition, effects 2257
 - Acinetobacter* 1308
 - aerobic treatment, anaerobic treatment, bacteria, characteristics 1302
 - anaerobic conditions, aerobic conditions, control 2330
 - bacteria, identification 3743
 - bioreactors 1659
 - bulking, foaming, control 1322
 - cells, pH, control 3724
 - control, Denmark 2620
 - determination 690
 - Dreissena polymorpha* 688
 - ethylene diaminetetracetic acid 2636
 - mathematical models 410
 - nitritotriacetic acid 2636
 - South Africa, monitoring, control 2635
 - UK 670
 - aquatic plants, drains, wetlands, Australia 1346
 - biological filtration, sand, Sweden 1603
 - biological fixed-film systems 689
 - biological treatment, anaerobic conditions, solids retention time, effects 3754
 - denitrification, activated sludge, acetate, hydrolysate, substrates 3711
 - nitrification, activated sludge, acetate, hydrolysate, substrates 3711
 - nitrification + denitrification, activated sludge, Italy 3744-3745
 - sewage
 - activated sludge 687
 - biological treatment
 - filters, submerged 1657
 - Netherlands 3702
 - bioreactors, aerobic treatment, anaerobic treatment, USA 2627
 - Escherichia coli*, genetic engineering 3753
 - Israel 3709

Phosphorus cont.

- removal cont.
 - sewage sludge, biological treatment, Sweden 3706
 - sludges, biological treatment, anaerobic conditions, volatile fatty acids, production, effects 1658
- waste water
 - activated sludge, biological filtration 3699
 - aerobic treatment + anaerobic treatment, temperature 3742
 - anaerobic conditions, models 686
 - biological treatment
 - mathematical models 3752
 - Netherlands 3700-3701, 3750
 - bioreactors
 - aerobic treatment, anaerobic treatment, USA 2627
 - anaerobic conditions 3749
 - waste water treatment, biological treatment, Sweden 2618
- sewage, eutrophication, lakes, Northern Ireland 1129
- uptake
 - enhancement, waste water treatment, bacteria 691
 - sewage, *Botryococcus braunii*, growth 1839
- Photobacterium histaminum*, viability, enzyme activity, cold storage 1098
- Photobacterium phoreum*, sewage, toxicity, monitoring 1237
- Photobacterium phosphoreum*, viability, enzyme activity, cold storage 1098
- Photography**
 - waste water
 - biological treatment
 - activated sludge 1426
 - anaerobic digestion 1691
- Phragmites australis**
 - comparisons, lagoons, wetlands, constructed, Australia 1341
 - nutrients, removal, wetlands, constructed, USA 1349
 - reed beds, bioremediation, reviews 1843
 - rhizomes, biofilms, nitrogen, cycling, sewage, treatment, hydroponics 1333
- Phthalates**
 - adsorption, waste water treatment, *Pseudomonas fluorescens*, biomass 1425
 - biodegradation, soil 1163
 - esters, biodegradation, *Chlorella pyrenoidosa*, kinetics 3441
- Phylogenetics**, genetics, *Listeria monocytogenes*, identification, electrophoresis 3114
- Phytase**, production, *Aspergillus carbonarius*, surfactants 1401
- Phytic acid**, hydrolysis, rape, oils, production, *Aspergillus carbonarius* 1401
- Phytophthora porri*, cabbages, storage decay, USA 111
- Phytotoxins**
 - fish, food poisoning 1878
 - seafoods, food poisoning 1878
 - shellfish, food poisoning 1878
- Pichia farinosa*, mycotoxins, characterization 2928
- Pichia stipitis*, xylose, fermentation, ethanol production, bioreactors, optimization 549
- Pig manure**
 - biodegradation
 - biogas, production 494
 - bioreactors, mathematical models, temperature, kinetics 1766
 - biological treatment
 - biogas, production, Netherlands 2687
 - Spirulina maxima*, immobilization 752
 - composting, microbial activities 3809
 - denitrification, activated sludge+molasses 1764
 - fermentation, methane production, psychrotrophic microorganisms, cold climates, effects 3807
 - nitrification, activated sludge+molasses 1764

Pig manure + wheat straw

- fermentation
 - silage making
 - molasses
 - inoculation
 - Lactobacillus plantarum* 760
 - Streptococcus faecalis* 760

Pig slurry

- application to land, microbial contamination, water, indicator species 2223
- biodegradation, *Musca domestica*, larvae, feeds, production 2375
- biogas, production, anaerobic digestion, zeolites, additives, Cuba 1422
- biological treatment, lagoons, France 2686
- bioreactors, aerobic treatment, performance, mathematical models 754

Pig slurry + sorghum, fermentation, feeds, production 2372**Piggery effluent**

- aerobic treatment, volatile compounds, odours, monitoring 1763
- ammonia, removal, bacteria, Taiwan 2621
- anaerobic digestion, Korea Republic 1769
- anaerobic treatment
 - bioreactors
 - equations 753
 - methane production 1765
 - biodegradation, activated sludge, *Phormidium* 1768
 - biological treatment
 - activated sludge, nitrous oxide, emission 3808
 - Phormidium* 1767
 - cyanobacteria, growth, chemical composition 2368
- straw
 - anaerobic digestion 751
 - methane production, anaerobic digestion 493
 - waste water treatment, biological fixed-film systems + aquatic plants 2685

Pigmeat

- Aeromonas hydrophila*, control, essential oils 2047
- bacteria
 - colonization, monitoring, microscopy 35
 - modified atmosphere storage, keeping quality 978
- carcasses, microbial flora, water reuse 974
- Clostridium algicarnis*, taxonomy 139
- contamination, *Listeria monocytogenes*, detection, polymerase chain reaction 16
- Escherichia coli*, isolation 1889
- irradiation, *Salmonella typhimurium*, survival, water content, sodium chloride, sucrose, effects 3059
- Listeria monocytogenes*
 - control, nisin, modified atmosphere storage 138
 - growth, inhibition, modified atmosphere storage+nisin 973
 - heat treatment, survival 140
 - storage, survival 140
- modified atmosphere storage
 - Listeria monocytogenes*, survival 2049
 - microbial flora 141
 - Yersinia enterocolitica*, survival 2049
- pathogens, growth, control, lactic acid 2979
- Pseudomonas fragi*, growth, inhibition, modified atmosphere storage+nisin 973
- quality
 - bacterial count
 - control
 - sodium chloride 2048
 - sodium lactate 2048
 - Salmonella typhimurium*, inhibition, acetic acid, temperature 977
 - soyabean husks, microbial contamination, *Listeria monocytogenes*, control, heat treatment 3046

Pigment *cont.*

spoilage, microbial contamination, meat production 2050

Streptococcus, antibiotics, resistance 1112

vacuum packaging, microbial contamination, control, disinfection, sprays 976

Yersinia enterocolitica

isolation 975, 1889

Morocco 2032

Yersinia pseudotuberculosis, isolation 1889

Pigs

carcasses

abattoirs

microbial contamination

Aeromonas 2130

Listeria 2130

Yersinia 2130

Campylobacter

abattoirs, equipment, contamination, Canada 1025

Trinidad and Tobago 2051

Campylobacter coli, control, lactic acid 979

decontamination, hot water treatment 2052

Escherichia coli, abattoirs, equipment, contamination, Canada 1025

Listeria monocytogenes, Trinidad and Tobago 2051

Salmonella

abattoirs, equipment, contamination, Canada 1025

control, lactic acid 979

Yersinia enterocolitica, Trinidad and Tobago 2051

Pimelobacter, pyridine, biodegradation, techniques, immobilization, assessment 1824

Pineapple juice, *Neosartorya fischeri*, heat resistance 96

Pinus, copper naphthenate, termites, resistance 189

Pinus contorta, sapwood, biodeterioration, *Ophiostoma* 2102

Pinus sylvestris

Aspergillus versicolor, biomass, determination, ergosterol 3004

Penicillium brevicompactum, biomass, determination, ergosterol 3004

Pipelines, biofilms, sulfate reducing bacteria, control, biocides, physical models 3028

Piromonas communis, cellulose, biodegradation, cellulase 3884

Pistachios, aflatoxins, determination 1959

Plant design, activated sludge, variation, mathematical models 406

Plant oils

maize, *Aspergillus flavus*, aflatoxins, production, control 63

Thymus vulgaris

antibacterial agents

Salmonella typhimurium, control 1051

Staphylococcus aureus, control 1051

Plant residues

anaerobic treatment, energy, production, developing countries 3394

biodegradation

Aspergillus ochraceus

xylanase, production 2376

β -xylosidase, production 2376

bacteria, pectate lyase, production, fuels, production 3397

biogas, production, reviews 3395

ethanol production, *Trichoderma reesei* + *Saccharomyces cerevisiae* 2384

biogas, production 488

composting

economics, USA 366

Germany 3294

USA 1247, 1250

composting + anaerobic digestion, methane production 1758

decomposition

Lactobacillus paracasei 2472

Lactobacillus plantarum 2472

Plant residues *cont.*

domestic gardens, bacterial count, North America 3195

fuels, production 488

sewage sludge, composts, production, marketing, USA 1253

utilization

proteins, production, *Aspergillus fumigatus* 554

sugars, production, *Penicillium oxalicum* 554

Plants

historic buildings, biodeterioration, reviews 2221

soil, heavy metals, biosorption 3672

uptake, soil pollution, heavy metals, bioremediation 2589

Plasmids

analysis, *Salmonella enteritidis*, Australia 1879

2,4-D

biodegradation

Alcaligenes paradoxus 780

Pseudomonas pickettii 780

Plastic film, bakery products, modified atmosphere packaging, *Staphylococcus aureus*, enterotoxins, Italy 1983

Plastic pipes, biodeterioration, bacteria, water supply, biofilms, formation, characterization, dental health 2838

Plastics

biodegradability

methodology 1541

standards 1541

biodegradation, microorganisms, evaluation 606

biodegradable, reviews 1545

production, lignin, polymerization, *Trametes versicolor* 1465

starch, biodegradation, enzymes, nuclear magnetic resonance spectroscopy 605

Platinum, binding, *Pseudomonas fluorescens* 3658

Plectonema boryanum

organotin compounds, sorption 612

tributyltin, sorption 612

Plesiomonas shigelloides, surface water, contamination, faces, temperature, effects 2226

Pleurotus, efficiency, cotton waste, utilization 2497

Pleurotus eryngii

aromatic hydrocarbons, biodegradation, hydrogen peroxide, production, alcohol oxidoreductases 582

laccase, enzyme activity, homoveratric acid, biodegradation 1469

Pleurotus ostreatus

control

timbers

decay

Aspergillus niger 185

Penicillium 185

Trichoderma viride 185

enzymes, lignin, biodegradation, manganese, effects 3521

growth

barley straw, biodegradation, feeds, production, kinetics 3528

dates, wastes + rice straw 2367

Eichhornia crassipes, biodegradation, feeds, production, kinetics 3528

mangoes, wastes + rice straw 2367

maize stover, biodegradation 532

maize straw, biodegradation, feeds, production 464

phenols, biodegradation, enzymes 542

Pleurotus pulmonarius, atrazine, biodegradation, metabolites 3624

Pleurotus sajor-caju

rice straw, biodegradation 1464

soyabeans, wastes, biomass production 2373

Pleurotus sajor caju, wheat straw, biodegradation, enzymes, production 2752

Pleurotus sajor-caju, wheat straw, fermentation, gases, effects 2486

Plum, pickling, waste water, anaerobic treatment 695

Plutonium oxide, solubilization, bacteria, iron, reduction 1576

Poland

Calamagrostis arundinacea

decay

fungi

distribution 2100

new species 2216

coke, production, waste waters, phenolic compounds, removal, biological treatment, activated sludge 590

timbers

biodeterioration

mushroom houses

bacteria 3002

wood destroying fungi 3002

Polioviruses

shellfish, contamination, Morocco, detection, comparisons 2786

survival, waste water, water 2178

Pollutants

biodegradation

Phanerochaete chrysosporium,

reviews 307

wood destroying fungi 306

reviews 307, 3205

environment, microbial degradation, *Phanerochaete chrysosporium*, biochemistry 271

hydrocarbons, biodegradation, microorganisms 2531

hydrophobic, biodegradation, *Pseudomonas*, surfactants, enhancement 3401

removal, groundwater, bioremediation, mathematical models 3226

Polluted soils

anthracite waste, biological treatment, rotating biological contactors 3459

antracenes, biodegradation, bioreactors 323

aromatic hydrocarbons

biodegradation

bioreactors 323

microorganisms 322

pretreatment, enhancement 3550

bioremediation 3236

bacteria, biodegradation, plasmids, transfer, Czech Republic 3833

bioremediation 1165

bioreactors 3219

biotechnology 3235

books 284, 832

Phanerochaete chrysosporium 2260

reviews 284, 309, 3244

technology, USA 326

trials, chlorinated hydrocarbons, biodegradation, filters, sand 3568

cadmium

bioremediation

Silene vulgaris 1164

Thlaspi caerulescens 1164

creosote, biodegradation, microorganisms 322

cyanides, biodegradation, microbial flora, bioremediation 1552

diesel oil

biodegradation

composting 321

slow release fertilizers, USA 318

bioremediation 319, 3230

Antarctica 3229

USA 316

fuel oils

biodegradation

bioremediation

actinomycetales, Arab countries 2502

cyanobacteria, Arab countries 2502

fungi, Arab countries 2502

bioremediation 3230

Antarctica 3229

heavy metals

bioremediation, surfactants, microorganisms, production 3651

removal

bioremediation

Canada 1166

USA 1166

Polluted soils cont.

- hydrocarbons
 - biodegradation, bioremediation, models, evaluation 3225
 - bioremediation 3234
 - methodology, USA, California 320
 - toxicity, soil flora, bioremediation, effects 3237
- ketones, biodegradation, bioremediation 530
- mineral oils
 - biodegradation
 - microorganisms
 - ketones, production 1509
 - organic acids, production 1509
- naphthalene, biodegradation, bioremediation 530
- oil refineries, petroleum hydrocarbons, biodegradation, Italy 3569
- oil refinery wastes
 - biodegradation
 - bioremediation
 - actinomycetales, Arab countries 2502
 - cyanobacteria, Arab countries 2502
 - fungi, Arab countries 2502
- organic compounds
 - removal
 - bioremediation
 - Canada 1166
 - USA 1166
- pentachlorophenol
 - biodegradation
 - microorganisms 322
 - Phanerochaete chrysosporium* 3593
- pesticides
 - biodegradation, bioremediation, Germany 3242
 - bioremediation, mushroom compost 3243
- petroleum, bioremediation, surfactants 633
- petroleum hydrocarbons
 - biodegradation
 - microbial activities 1520
 - soil bacteria 569
 - bioremediation
 - bioventing 3239
 - reviews 3218
 - sludges, bioremediation, techniques, assessment, toxicity 2267
- selenium, bioremediation, vegetation, management, USA 3695
- sulfate reducing bacteria, techniques, characterization, DNA probes 311
- tetradecane, biodegradation, bioremediation 530
- trinitrotoluene, biodegradation, *Pseudomonas* 527
- wood destroying fungi, growth, pentachlorophenol, biodegradation, methodology 3590
- zinc
 - bioremediation
 - Silene vulgaris* 1164
 - Thlaspi caerulescens* 1164

Polluted water

- adenoviridae, detection, polymerase chain reaction 3188
- bioremediation 593
 - books 832
 - Phanerochaete chrysosporium* 2260
 - creosote, nitrification, inhibition 3145
 - 2,4-dichlorophenol, biodegradation, vegetables, enzymes 593
 - Entamoeba histolytica*, concentration, India 2778
 - faecal flora, detection, immunoassays, monoclonal antibodies 3191
 - hexadecane, biodegradation, *Acinetobacter*, Argentina 565
 - lead, removal, bioremediation, *Eichhornia crassipes* 2588
 - marine areas, *Aeromonas*, distribution, Spain 265
 - organic compounds, mutagenicity, *Salmonella*, toxicity 278

Polluted water cont.

- poultry farming, *Campylobacter*, detection 3894
- sea water, ammonia, nitrification, bacteria, activated sludge 402
- trichloroethylene, bioreactors 3463
- Pollution**
 - bioremediation
 - biochemistry 308
 - ecology 308
 - field tests, evaluation 3203
 - reviews 3213, 3231
 - chlorinated hydrocarbons, soil, bioremediation, USA 2265
 - chromium
 - soil, bioremediation, reviews 648
 - water, bioremediation, reviews 648
 - control, wastes, reduction, books 308, 327, 506, 708, 829
 - drinking water, faecal coliforms, indicator species, France 861
 - environment, landfill leachates, biological indicators 1157
 - groundwater
 - aromatic hydrocarbons, biodegradation, *Mycobacterium vaccae* 3496
 - organochlorine compounds, biodegradation, *Mycobacterium vaccae* 3496
 - polycyclic hydrocarbons, biodegradation, *Mycobacterium vaccae* 3496
 - hydrocarbons, bioremediation, books 2793
 - industrial sites, bioremediation, USA 317
 - mucilages, pathogens, Adriatic Sea 1874
 - oil refinery wastes, bioremediation, bacteria, characterization, Germany 3209
 - petroleum hydrocarbons
 - bioremediation, reviews 3204
 - soil
 - bioremediation
 - composts 2270
 - models 3238
 - polycyclic hydrocarbons, bioremediation, reviews 2259
 - prevention, control, EC Regulations, discussion 287
 - sea water, *Escherichia coli*, Brazil 2234
 - soil
 - biphenyl, biodegradation, bacteria, characterization 3484
 - polychlorinated biphenyls, biodegradation, bacteria, characterization 3484
 - toxic substances, bioremediation, books 2796
 - trichloroethylene, groundwater, bioremediation, nitrogen, phosphorus, USA 2263
 - trinitrotoluene, soil, bioremediation, anaerobic conditions, USA 2269
 - Pollution control**, aquatic plants, wetlands, constructed, USA 1347
 - Poly-(β -hydroxybutyrate-co- β -hydroxyvalerate)**
 - biodegradation
 - microorganisms
 - aerobic conditions 3614
 - anaerobic conditions 3614
 - Poly-D-3-hydroxybutyric acid**, biodegradation, *Alcaligenes eutrophus* 3478
 - Poly-(β -hydroxybutyric acid**
 - production
 - xylose
 - biodegradation
 - Alcaligenes eutrophus* 3522
 - Lactococcus lactis* 3522
 - Polychlorinated biphenyls**
 - biodegradation 2464
 - activated sludge, *Alcaligenes* 3472
 - aerobic conditions, reviews 3481
 - bacteria 2414
 - characterization, soil, pollution 3484
 - consortium 595
 - genes, rivers, sediment, Germany 3199

Polychlorinated biphenyls cont.

- biodegradation cont.
 - contaminated soils, microorganisms, determination, gene probes 3577
 - Corioliopsis polysona*, cultures 602
 - enhancement
 - bacteria, inoculation, soil 3498
 - Fenton's reagent 2465
 - lakes, sediment, microorganisms, Germany 3435
 - microorganisms, isolation 3424
 - Phanerochaete chrysosporium* 3466
 - cultures 602
- Pseudomonas*
 - enzymes 1530
 - genetic engineering 2735
- Pseudomonas fluorescens*, genetic engineering, rhizospheres 3439
- Rhodococcus globerulus*, genes 1533
- rivers
 - sediment
 - microorganisms
 - Germany 3435
 - USA 2463
- sediment
 - anaerobic conditions, techniques 3505
 - hydrogen 1534
- soil
 - Alcaligenes* 2467
 - microorganisms, anaerobic conditions 2466
 - Phanerochaete sordida* 2534
 - Pseudomonas* 2467
 - Trametes versicolor*, cultures 602
- water
 - Alcaligenes*, sample pretreatment, chemicals, aerobic conditions 3449
 - Pseudomonas*, sample pretreatment, chemicals, aerobic conditions 3449
- Pseudomonas putida*
 - benzoates, biodegradation 3489
 - plasmids, biodegradation 3489
- soil, bioremediation, thermal desorption, effects 3599
- Polychlorophenols**, biodegradation, *Mycobacterium fortuitum*, characterization, identification 3422
- Polycyclic hydrocarbons**
 - biodegradation
 - Bjerkandera*, peroxidases 1471
 - marine sediments
 - Trichosporon penicillatum*, USA 2510
 - yeasts, USA 2510
 - microorganisms
 - bioremediation
 - soil
 - sorption, extraction 3490
 - transport processes, extraction 3490
 - isolation, marine environment, Canada 1492
 - sewage sludge, detection, screening 813
 - Mycobacterium vaccae*, groundwater, pollution 3496
 - Phanerochaete chrysosporium* 3467
 - detoxification, fungi 580
 - metabolism, fungi 580
 - pollution, bioremediation, reviews 2259
 - soil, bioremediation, *Mycobacterium* 2264
 - Polymethylsiloxanes**
 - inhibition
 - activated sludge 3318
 - anaerobic digestion 3318
 - Polyesters**
 - biodegradation, *Rhizopus delemar*, enzymes, triacylglycerol lipase 2564
 - biodeterioration, bacteria, *Corynebacterium*, esterase 1019
 - production
 - alcohols, utilization, *Alcaligenes eutrophus* 472
 - carboxylic acids, utilization, *Alcaligenes eutrophus* 472

Polyethylene

- biodegradation
 - Aspergillus tamerii* 2561
 - recycling 1549

Polyethylene film, starch, biodegradation, composting, Italy 3279**Polyethylene films**, biodegradation, starch, environmental factors, microorganisms 1543**Polyhydroxyalkanoic acids**

- production
 - 1,3-butanediol, biodegradation, *Pseudomonas* 1443
 - 3-hydroxybutyric acid, biodegradation, *Pseudomonas* 1443

Polyhydroxybitterate, biodegradation, bacteria 1550**Polyhydroxybutyrate**

- production
 - Alcaligenes eutrophus* 743
 - Azotobacter vinelandii*, culture media 3611
 - Methylobacterium extorquens* 743
 - olive oil, waste water, utilization, *Azotobacter chroococcum* 2380

Poly(3-hydroxyoctanoic acid)

- biodegradation
 - bacteria
 - poly(3-hydroxyoctanoic acid) depolymerase enzyme activity 3613
 - synthesis 3613

Polymers

- biodegradation
 - aquatic environment, assessment, modification 300
 - biochemistry 1548
 - books 1540-1541, 1548-1549
 - chemistry 1548
 - microorganisms 1544
 - biodeterioration, fungi, determination, comparisons 1542
 - characteristics, nutrients, removal, activated sludge 1614
 - polyesters, biodegradation, microorganisms, soil 3606
 - production, 3,4-dichloroaniline, biodegradation, *Phanerochaete chrysosporium*, identification, hplc 3634

Poly(2-oxepanone), biodegradation, microorganisms 1450**Polyphenols**

- biodegradation, microorganisms, reviews 598
- hydroxystyrol, purification, olive oil, waste water, chromatography 587

Polyphosphates

- accumulation, bacteria, bioreactors, anaerobic treatment, aerobic treatment, population dynamics 1819
- Staphylococcus aureus*, antimicrobial properties 1045

Polypropylene, surfaces, *Listeria monocytogenes*, adhesion, biological control 3088**Polysaccharides**

- biodegradation, waste water 1203
- production

- brewery effluent, fermentation 450
- marine fouling, *Navicula subinflata*, chemistry 3042

Polyurethane, foams, biodegradation, fungi 2565**Polyurethanes**, biodegradation, *Curvularia senegalensis*, soil, enzymes, characterization 509**Poly(vinyl alcohol)**, microorganisms, immobilization, denitrification, bioreactors 1168**Poly(vinyl chloride)**

- biodegradation
 - Alcaligenes faecalis* 2563
 - Mycobacterium aurum*, substrates, oxygen, effects 3607

Polyvinylamine sulfonate anthrapyridone, decolorization, *Cyathus bulleri* 1593**Poly(vinyl)choride**, biodeterioration, fungi, cryo-electron microscopy 1017**Ponds**

- aeration, oil refineries, waste water, biological treatment 3770

algae

- performance, sewage, biological treatment, Morocco, climate, effects 416

- waste water, biological treatment, Israel 3341

- anaerobic conditions, sewage, biological treatment 1230

- anaerobic treatment, sewage, methane production, Portugal 1375

biological treatment

- algae, growth, organic carbon, effects 413

- bacteria, growth, organic carbon, effects 413

- latex, rubber, waste water, India 2669

- light, penetration, algae, effects 414

- Chlorella vulgaris*, waste water, biological treatment 3342

design

- waste water treatment
 - indicator species, removal 3340
 - mathematical models 3337

- drainage water, selenium, removal, algae + bacteria, USA 3694

- Eichhornia crassipes*, sewage, biological treatment 2271

faecal coliforms**dynamics**

- pH, effects, Morocco 3169

- solar radiation, effects, Morocco 3169

- temperature, effects, Morocco 3169

- Salvinia molesta*, sewage, biological treatment 2271

- sea water+piggery effluent, single cell protein, production, *Spirulina maxima* 3375

sewage**algae****production**

- amino acids, France 2370

- fatty acids, France 2369

biological treatment

- Daphnia*, mathematical models 3333

- mathematical models, kinetics 422

- Salmonella*, antibiotics, resistance, Morocco 3162

Vibrio cholerae**dynamics**

- pH, effects, Morocco 3169

- solar radiation, effects, Morocco 3169

- temperature, effects, Morocco 3169

waste water**biological treatment**

- mathematical models, kinetics 422

- pathogens, mortality, mathematical models, Tanzania 2336

review**1169****waste water treatment****algae****1838****production, Kuwait**

- 460

- Brachionus calyciflorus*, growth 3767

catalases, enzyme activity, monitoring**1208****China****1372****Lemna gibba, Egypt****2339****models****1373****Ponds + lagoons****aeration**

- denitrification, biological treatment, effluents, recirculation 3716

- nitritification, biological treatment, effluents, recirculation 3716

Porous media

- sulfates, reduction, *Desulfovibrio desulfuricans*, kinetics 3680

transport processes

- Bacillus licheniformis* 788

bacteria, models**789****Porphyridium**, polysaccharides, biodegradation, soil, bacteria 2569**Porphyris**, bioremediation, reviews 3208**Portugal**

- beaches, sand, microbial contamination 3136

- buildings, biodeterioration, *Ailanthus altissima*, roots 3024

grape must

- Lactobacillus paracasei* subsp. *paracasei*, identification 92

- Leuconostoc oenos*, identification 92

- sewage, ponds, anaerobic treatment, methane production 1375

wines

- Lactobacillus paracasei* subsp. *paracasei*, identification 92

- Leuconostoc oenos*, identification 92

Postharvest decay

- apples, *Penicillium expansum*, control, calcium 928

cherries***Alternaria*****107*****Aureobasidium pullulans*****107*****Cladosporium*****107****control**

- fruit, reviews 926

- vegetables, reviews 926

- crops, biological control 105

- potatoes, *Erwinia carotovora*, control, calcium 928

Potable water, water hardness, reduction, *Moringa oleifera* 1751**Potassium**, calcium, anaerobic treatment, inhibition, coffee, waste water 2345**Potassium dichromate**, *Cryptosporidium parvum*, survival 2825**Potassium sorbate**

- alcoholic beverages, spoilage, yeasts, control 2151

refrigeration

- beef, *Listeria monocytogenes* 2091

- sausages, *Listeria monocytogenes* 2091

- vacuum packaging, poultry, carcasses, keeping quality 2068

Potato waste**utilization****microorganisms**

- biosurfactants, production, mathematical models 2385

- glycerol, production, mathematical models 2385

- solvents, production, *Clostridium acetobutylicum* 541

Potatoes

- postharvest decay, *Erwinia carotovora*, control, calcium 928

- storage decay, microbial contamination, *Erwinia carotovora*, population dynamics 927

- sulfite, treatment, *Clostridium botulinum*, toxins, production, vacuum packaging 2008

- wastewater, biological treatment, activated sludge, microorganisms, augmentation 2320

Poultry

- Campylobacter coli*, monitoring, reviews, USA 2818

- Campylobacter jejuni*, monitoring, reviews, USA 2818

- carcass disposal, composting, viruses, survival 1771

carcasses**abattoirs**

- bacterial count 911

- mathematical models 1006

- Campylobacter*, control, trisodium phosphate 994

- chilling, *Salmonella*, control, pyrophosphates, antibacterial properties 2988

- keeping quality, vacuum packaging, potassium sorbate 2068

- Listeria*, South Africa 1003

- microbial contamination

- Campylobacter*, trisodium phosphate, washing, control 2986

- techniques, assessment 2989

Poultry cont.

- carcasses *cont.*
 - plucking
 - equipment
 - contamination
 - Escherichia coli* 993
 - Staphylococcus* 993
 - Salmonella*, Spain 89
 - Salmonella choleraesuis*, control, per-oxidases, dips 991
 - Salmonella typhimurium*
 - control
 - disinfectants, keeping quality 1002
 - sodium phosphate 989
 - ultrasonics 2078

contamination

- Escherichia coli*, South Africa 863
- Staphylococcus aureus*, South Africa 863

- Escherichia coli*, monitoring, reviews, USA 2818

feathers

- biodegradation, *Bacillus licheniformis*, keratinase 756
- upgrading, proteins, production, alkaline proteinase 1417

- feeds, *Salmonella*, detection, rapid methods 1968-1969

hair, biodegradation, *Bacillus*

- licheniformis*, keratinase 756

- Listeria monocytogenes*, monitoring, reviews, USA 2818

microbial contamination

- Campylobacter jejuni*, health hazards 2069

- Salmonella*, health hazards 2069

- plucking, machinery, *Staphylococcus*, colonization 2128

- pressure treatment, pathogens, control 3045

- processing, equipment, contamination, *Listeria*, South Africa 1003

skin

- biodegradation, *Bacillus licheniformis*, keratinase 756
- microbial contamination
 - refrigeration, South Africa 2063
 - Salmonella*, control, disinfectants, assessment 997
 - Salmonella typhimurium*, control, sodium phosphate 989
- wastes, anaerobic digestion, research, USA, reviews 756

Poultry carcasses

- Salmonella typhimurium*
 - control
 - electrical stimulation 155
 - trisodium phosphate 155

Poultry farming

- polluted water, *Campylobacter*, detection 3894

- water supply, *Campylobacter*, detection 3894

Poultry fat

- hydrolysis
 - Aspergillus niger* 2681
 - Geotrichum candidum* 2681
 - Mucor miehei* 2681

- Poultry litter**, anaerobic digesters, microbial flora 2682

Poultry manure

- amendments, composting, New Zealand 1770
- anaerobic digestion, metals, methane production, India 1390
- biodegradation, mushroom compost, production, temperature, nitrogen 1238
- biogas, production, India 3392
- composting, ammonia, absorption, bark, soil, phosphate rock, solubilization 755
- feeds, production, fungi, contamination, aflatoxins 70
- fractionation, storage, pathogens, survival 2240
- litter, composting 2301
- Salmonella*, serotypes, identification, polymerase chain reaction 259
- straw, composting, aeration, temperature 1254

Poultry manure cont.

- utilization, *Hermetia illucens*, feeds, production 2688

Poultry meat

- Bacillus cereus*, control, gamma radiation 222

Campylobacter

- assessment, nucleic acids, hybridization, USA 871

- control, irradiation 2072

- isolation 33

- contamination, *Salmonella enteritidis*, reviews 1793

- irradiation, screening, bacterial count 2994

- modified atmosphere storage, bacteria, spoilage 154

- processing, equipment, *Staphylococcus*, benzalkonium chloride, resistance 240

- production, waste water, microbial contamination, determination, ATP, bioluminescence 153

- quality

- monitoring

- Enterobacteriaceae, enumeration 149

- Escherichia coli*, enumeration 149

Salmonella

- detection 881

- serotypes, identification, polymerase chain reaction 259

- Salmonella typhimurium*, detection 2774

- vacuum packaging, bacteria, spoilage 154

Poultry products

- microbial contamination, *Yersinia* 156

- processing, wastes, fermentation, single cell protein, production 1400

- Salmonella*, Thailand 152

Powdered activated carbon

- activated sludge, petrochemical industry, biological treatment, Israel 727

- Power stations**, waste gases, carbon dioxide, fixation, algae 3886

Prawns

- fresh water, microbial contamination, *Aeromonas*, Bangladesh 2966

- microbial contamination, control, gamma radiation 122

- production, ponds, waste water, recycling, biological filtration 3366

- Preliminary treatment**, aerobic conditions, microorganisms, olive oil, production, waste water, anaerobic treatment, effects 700

Prepared foods**salads**

- microbial contamination, UK 99

- yeasts, UK 99

- vegetables, contamination, *Clostridium botulinum*, bacterial toxins 890

- Yersinia enterocolitica*, isolation 975

Preservation

- basidiomycetes, cultures 817

olives

- lactic acid bacteria 108

- microbial flora 108

- shrimps, glucose oxidase, catalase 116

- sodium benzoate, *Averrhoa carambola*, fruit juices, keeping quality 921

- sodium bisulfite, *Averrhoa carambola*, fruit juices, keeping quality 921

- sodium sorbate, *Averrhoa carambola*, fruit juices, keeping quality 921

Preservative treated wood

- decay, bacteria 184

- Tyromyces palustris*, resistance 192

Preservatives

- cosmetics, testing 1020

- Cryptosporidium parvum*, survival 2825

- pharmaceutical products, testing 1020

Pressure**effects**

- Listeria monocytogenes*, electron microscopy 3098

- Salmonella thompson*, electron microscopy 3098

Pressure treatment

- Bacillus stearothermophilus*, spores, inhibition 219

- milk, pathogens, control 3045

Pressure treatment cont.

- poultry, pathogens, control 3045

Processed cheese

- keeping quality

- microbial flora

- Croatia

- acidity 179

- pH 179

Processed foods

- Staphylococcus aureus*, detection, ELISA 1082

- strawberries, contamination, *Saccharomyces cerevisiae*, control, heat treatment 931

- Production**, sewage, biodegradation, feeds, ponds, *Lemna gibba* 461

- Prokaryotes**, sulfates, reduction, metabolism 1797

- 1,3-Propanediol**, production, *Citrobacter freundii*, immobilization, bioreactors, design 1415

- Propanediols**, production, propanols, biodegradation, *Corynebacterium* 3499

- Propanil**, biodegradation, bacteria, lakes 1564

- Propanols**, biodegradation, propanediols, production, *Corynebacterium* 3499

Propionate**biodegradation**

- anaerobes, kinetics, reviews 3440

- anaerobic treatment, bacteria, electron transfer 3469

- waste water, *Methanothrix*, granules, bioreactors, performance 1228

- Propionates**, oxidation, sludges, anaerobic treatment, bacteria, interactions 2737

Propionibacterium

- anaerobic digesters, identification 432

- starch, utilization, propionic acid, production 1813

- Propionibacterium acidipropionici**

molasses**utilization**

- propionic acid, production 479

- vitamins, production 479

sugar**utilization**

- propionic acid, production 479

- vitamins, production 479

Propionic acid**biodegradation*****Methanobacterium******thermoautotrophicum***

- acetic acid, effect, anaerobic conditions 3488

- butyric acid, effect, anaerobic conditions 3488

- fish, preservation, yeasts, resistance, isolation 936

production

- molasses, utilization, *Propionibacterium acidipropionici* 479

- starch, utilization, *Propionibacterium* 1813

- sugar, utilization, *Propionibacterium acidipropionici* 479

- Propylbenzene**, biodegradation, *Mycobacterium vaccae*, soil, metabolites, toxicity 574

Prostheses**rubber****microbial contamination**

- bacteria, biofilms, characterization 1018

- yeasts, biofilms, characterization 1018

Protamines

- Bacillus cereus*, inhibition 1034

- Listeria monocytogenes*, inhibition 1034

- Protease**, production, distillery wastewater, *Aspergillus usami* mut. *shirousami*, Japan 468

- Protective coatings**, cooper + silver, catheters, materials, microbial contamination, control 2129

Proteins**fermentation**

- Archaea*, marine environment, USA 514

- thermophilic microorganisms, marine environment, USA 514

Proteins cont.

- Listeria*, bacteriophages, nucleotide sequences, isoelectric focusing 1103
- production
 - palm oils, utilization, *Candida tropicalis* 457
 - plant residues, utilization, *Aspergillus fumigatus* 554
 - poultry, feathers, upgrading, alkaline proteinase 1417
 - sugarcane trash, utilization, *Aspergillus fumigatus* 554
 - tomato pomace hydrolysis
 - Sporotrichum* 462
 - Trichoderma longibrachiatum* 462
- sorption, effects, silica, *Listeria monocytogenes*, adhesion 3107

Protozoa

- Enterobacteriaceae, biological control, fresh water 1069

- sewage, identification 1148

Pseudomonadaceae, antibacterial agents, meat, *Pseudomonas fragi*, control 1089**Pseudomonas**

- 2,2'-dihydroxybiphenyl, biodegradation 2428
- amides, biodegradation, cell cultures, immobilization 1456
- aniline, biodegradation, isolation, characterization 783
- aquifers, pollution, bioremediation, USA 1162
- beef, modified atmosphere storage, differentiation, culture media 52
- benzaldehyde, biodegradation, biochemical pathways 2576
- benzene, biodegradation, interactions 572
- benzoates, catabolism, nucleotide sequences 2422
- benzoic acids, biodegradation 2433
- biphenyl, biodegradation, enzymes 585
- 1,3-butanediol, biodegradation, polyhydroxyalkanoic acids, production 1443
- carbazole, biodegradation 1447
- carbon tetrachloride, biodegradation 2450
- chicken meat
 - characterization, Jamaica 992
 - isolation, Jamaica 992
- chlorobenzoate, biodegradation, anaerobic conditions, genetic engineering 3438
- chlorobenzoic acids, biodegradation, aerobic conditions 2425
- cholesterol
 - oxidation
 - solvents
 - diphenylmethane 3601
 - xylene 3601
- chromate, reduction, bioreactors 639
- chromates, reduction 1602
- coenzyme A, benzoate, biodegradation 1448
- coir, biodegradation 1468
- copper, mining, bacterial leaching, India 2671
- cyanuric acid, biodegradation 2432
- dehalogenase, cloning, gene expression 3839
- dehalogenases, cloning, gene expression 3840
- denitrification, waste water, bioreactors, cells, immobilization, determination 1627
- dimethylnaphthalene, oxidation 2509
- dinitrotoluene
 - biodegradation
 - genes
 - characterization 2429
 - cloning 2429
- dioxygenases, inactivation 2717
- enzyme activity, gene amplification, aromatic hydrocarbons, biodegradation 2505
- fuel oils, resins, biodegradation 3545
- genetic engineering, vectors 791
- HCH, biodegradation, triacylglycerol lipase, production 3622

Pseudomonas cont.

- hexachlorohexane, biodegradation, soil, enumeration, agar 3902
- 3-hydroxybutyric acid, biodegradation, polyhydroxyalkanoic acids, production 1443
- immobilization, gels, phenol, biodegradation 2549
- isolation, activated sludge, alkylphenol ethoxylate, biodegradation 3640
- β -lactams, antimicrobial properties, determination 1050
- lamb (meat), preparation, microbial contamination, physicochemical properties 2980
- lignin, biodegradation 1468
- metabolism, fluorene, biodegradation 3685
- microbial contamination, drinking water, bottled, Greece 26
- microbial lipids, emulsifiers, production 2721
- milk, proteinases, heat treatment 2082
- mineral waters, taxonomy 1912
- monochlorohydrin, isomers, biodegradation, isomers, production 465
- naphthalene, biodegradation, mathematical models 573
- new species, benzoate, biodegradation 521
- nitrotoluene, catabolism, biochemical pathways 2435
- para-saylene, biodegradation, interactions 572
- petroleum, microbial contamination 3008
- phenanthrene, biodegradation 1519, 3410
- phenols
 - biodegradation
 - aldehyde dehydrogenase 586
 - 4-hydroxy-2-hetovaleate aldolase 586
- phosphates, solubilization, soil 3747
- pollutants, hydrophobic, biodegradation, surfactants, enhancement 3401
- polychlorinated biphenyls
 - biodegradation
 - enzymes 1530
 - genetic engineering 2735
 - soil 2467
 - water, sample pretreatment, chemicals, aerobic conditions 3449
- spoilage, chicken meat, carcasses, cold storage 2909
- sulfate pulping, effluents, organochlorine compounds, removal 2417
- tetrachloroethylene, biodegradation 2420
- thiophene, biodegradation 1496
- toluene
 - biodegradation
 - anaerobic conditions, genetic engineering 3438
 - interactions 572
- trinitrobenzene, biodegradation 523
- trinitrotoluene, biodegradation, polluted soils 527
- uranium, uptake 480
- whey, proteinases, heat treatment 2082

Pseudomonas acidovorans

- 2-chloroaniline, biodegradation 784
- chloroanilines, biodegradation, soil 499
- soil, slurries, aromatic compounds, biodegradation 3460

Pseudomonas aeruginosa

- antibiotic resistance, water systems, isothiazolone, treatment, culture media 1028
- aromatic hydrocarbons, biodegradation, soil 3566
- biofilms
 - control, antibiotics, instruments, medical treatment, microbial contamination, evaluation 3021
- growth
 - control, culture, filters 3826
 - instruments, medical treatment, models 3022
 - thickness, variability, analysis 2706
- bottled water, contamination, detection, Canada 917
- butter, enterotoxins, production 157

Pseudomonas aeruginosa cont.

- carbohydrates, catabolism, enzymes, genetics 779
- chlorobenzenes, biodegradation, soil 1505
- chlorophenols, biodegradation 2396
- control, disinfectants 2165
- copper, sorption 3654
- denitrification, biological fixed-film systems 677
- disinfection, surfactants, efficiency 1054
- ice cream, enterotoxins, production 157
- isolation, soil, tetramethylthiuram disulfide, biodegradation 627
- mercury, sorption 641
- microbial contamination
 - rivers, Canada 1136
 - swimming pools, chloroisocyanurates 209
- milk, enterotoxins, production 157
- octadecane, biodegradation, biosurfactants, effects 3553
- pentachlorophenol, biodegradation 1531
- petroleum hydrocarbons, biodegradation, lipids, production 2379
- phenol, biodegradation 2539
- plasmids
 - sewage effluent disposal
 - sea water
 - coastal areas
 - antibiotics, resistance, Spain 3155
 - arsenic, resistance, Spain 3155
 - heavy metals, resistance, Spain 3155
 - shellfish
 - coastal areas
 - antibiotics, resistance, Spain 3155
 - arsenic, resistance, Spain 3155
 - heavy metals, resistance, Spain 3155
 - recovery, surfaces, techniques, comparisons 1090
 - resistance, water systems, microbial contamination, biocides, control 2133
 - slimes, formation, water systems, microbial contamination, characterization 3029
 - soil, slurries, aromatic compounds, biodegradation 3460
 - survival, mineral waters, microbial contamination 858

Pseudomonas cellulosa

- cellulose, biodegradation, amylases 2484
- characterization, cellulose, biodegradation 2740

Pseudomonas cepacia

- catechol, biodegradation 1490
- characterization, isoenzymes, electrophoresis 1081

2,4-D

- biodegradation
 - enzymes, purification 618
 - soil 1557
- naphthalene, biodegradation, montmorillonite/polyacrylamide, suspensions, kinetics 2443
- soil, slurries, aromatic compounds, biodegradation 3460
- trichloroethylene, biodegradation, bioreactors, mathematical models 3475
- water systems, iodine, resistance 263

Pseudomonas denitrificans, waste water treatment, denitrification, bioreactors, models 2624**Pseudomonas diminuta**, *Acinetobacter johnsonii*, thiocyanates, biodegradation 667**Pseudomonas fluorescens**

- atrazine, biodegradation, water 1558
- biomass, phthalates, adsorption, waste water treatment 1425
- chromium, reduction 1572
- control
 - nisin+EDTA 2166
- shrimps, spoilage, glucose oxidase, catalase 116
- decontamination, heavy metals, extraction, nitrotriactic acid 3657

***Pseudomonas fluorescens* cont.**

- dibutyl phthalate, biodegradation 2405
- growth
 - lamb (meat)
 - aerobic conditions 2053
 - modified atmosphere storage 2053
- heat resistance
 - fish
 - starvation 1079
 - water stress 1079
- heavy metals, binding 3658
- meat, refrigeration, detection, ELISA 872
- metals + citrates, biodegradation 2714
- naphthalene
 - biodegradation
 - naphthalene dioxygenase, photometry 1855
 - salicylic acids, production 568
 - sorption, soil, models 3461
- organic compounds, lignin, biodegradation 1476
- predation, *Tetrahymena pyriformis*, bioreactors 1307
- vegetables, enzyme activity 264
- viability
 - fish
 - starvation 1079
 - water stress 1079
- waste paper, hydrolysis, bioreactors, cellulase 3773

Pseudomonas fluoroscens*, polychlorinated biphenyls, biodegradation, genetic engineering, rhizospheres 3439**Pseudomonas fragi***

- control, meat, *Pseudomonadaceae*, antibacterial agents 1089
- growth
 - inhibition, pigmeat, modified atmosphere storage+nisin 973
 - lamb (meat)
 - aerobic conditions 2053
 - modified atmosphere storage 2053

Pseudomonas lundensis

- growth
 - lamb (meat)
 - aerobic conditions 2053
 - modified atmosphere storage 2053

Pseudomonas lutcola*, dyes, azo compounds, decolorization, Taiwan 1738**Pseudomonas maltophilia*, aromatic sulfonic acids, biodegradation 497*****Pseudomonas maltophilia***

- heavy metals, reduction 1584
- metabolism, characterization, 1-naphthoic acid, biodegradation 2448
- surfactants, production 2738
- toluene, biodegradation, aerobic conditions 3554
- xylene, biodegradation, aerobic conditions 3554

Pseudomonas marginalis

- growth
 - enzyme activity
 - pH, effects 3106
 - sodium chloride, effects 3106
 - temperature, effects 3106

Pseudomonas oleovorans

- hydrocarbons
 - biodegradation
 - fertilizers 1502
 - surfactants 1502

Pseudomonas pickettii*, 2,4-D, biodegradation, plasmids 780**Pseudomonas pseudoalcaligenes***

- 3-carboxydiphenyl ether, biodegradation, dioxygenase, genetics 2447
- 4-carboxydiphenyl ether, biodegradation, dioxygenase, genetics 2447

Pseudomonas pseudoalcaligenes*, nitrobenzene, biodegradation, enzymes, characterization 3248**Pseudomonas puacimibilis*, hexachlorohexane, biodegradation, biochemical pathways 3625*****Pseudomonas putida***

- acetonitrile, biodegradation, kinetics 2441
- activated sludge, fatty acids esters, biodegradation 2424
- alkylbenzenesulfonate, biodegradation, sulfur, utilization 3641
- aromatic acids, biodegradation 2662

***Pseudomonas putida* cont.**

- aromatic hydrocarbons
 - biodegradation
 - genetics 3556
 - soil 3566
- benzene, toluene, xylene, mixtures, biodegradation, genetic engineering 2504
- benzoates, biodegradation, polychlorinated biphenyls 3489
- benzothioephene, biodegradation, metabolites 507
- chloroform, biodegradation, *Methylosinus trichosporium*, oxygenases, activity 3446
- cyanides, biodegradation 1601
- cycloalkenones, biodegradation 2419
- cytochrome P450
 - DBCP, biodegradation 1489
- hydrocarbons, biodegradation 1489
- dehalogenase, genes, nucleotide sequences 3841
- dibenzothiophene, biodegradation 3420
- enzymes, DNA sequencing, catechol, biodegradation 594
- gene mapping, toluene, biodegradation 3549
- growth, bioreactors, toluene, transformation, toluene glycol, production 1411
- halogenated hydrocarbons, biodegradation 2458
- hydrocarbons
 - biodegradation
 - fertilizers 1502
 - surfactants 1502
- hydroxybenzoate, biodegradation, genes, characterization 774
- 4-hydroxybenzoate, biodegradation, genetics 3413
- naphthalene, biodegradation, genetics, biochemical pathways 3564
- nitriles, biodegradation 1601
- phenol, biodegradation, DNA sequencing 2537
- phenotypic stability
 - freeze drying, plasmids, viability 1810
 - storage, plasmids, viability 1810
- plasmids, biodegradation, polychlorinated biphenyls 3489
- pyrocatechol, biodegradation, catechol 2,3-dioxygenase, characterization 2250
- quinoline, biodegradation 2582
- sodium cyanide, biodegradation, kinetics 2441
- surface proteins, identification, toluene, biodegradation 2708
- toluene
 - biodegradation 3470
 - enzymes, characterization 3552
 - genetics 773
 - toluic acid, biodegradation 3470
 - trichloroethylene
 - biodegradation
 - genetic engineering 2406
 - Methylosinus trichosporium*, oxygenases, activity 3446
 - xylene, biodegradation, enzymes, characterization 3552

Pseudomonas putida*+*Escherichia coli*, chromium, reduction+phenol degradation 3468**Pseudomonas ruhlandii*, soil, slurries, aromatic compounds, biodegradation 3460*****Pseudomonas saccharophila*, *Pseudomonas stutzeri*, phenanthrene, biodegradation, physiology, comparisons 1499*****Pseudomonas solanacearum*, tannery waste, catechin, biodegradation, enzymes, production 3783*****Pseudomonas stutzeri***

- azo compounds, biodegradation 525
- Pseudomonas saccharophila*, phenanthrene, biodegradation, physiology, comparisons 1499
- resistance, water systems, microbial contamination, biocides, control 2133

***Pseudomonas stutzeri* cont.**

- strains, naphthalene, biodegradation, biochemical pathways, genetics, comparisons 3555
- survival, irradiation, titanium dioxide, effects 2139

Pseudomonas syringae*, gene transfer, *Synechococcus*, gene expression, carbon dioxide, biodegradation, ethylene, production 1786*Psychrotrophic bacteria, lamb (meat), carcasses, microbial contamination 2055****Psychrotrophic microorganisms, pig manure, fermentation, methane production, cold climates, effects 3807****Public health*****Larus delawarensis***

- water
 - microbial contamination
 - Aeromonas* 3227
 - coliform bacteria 3227
 - Salmonella* 3227

Pullulan, production, maize byproducts, *Aureobasidium* 2382**Pulp and paper industry**

- bleaching, effluents, irradiation, biodegradation, improvement 733
- effluents
 - biological treatment, activated sludge, Canada 2653-2654
 - waste treatment, reviews 1695
- pulps, mineralization, fungi, techniques, isolation 1697
- waste water
 - activated sludge, nutrients, discharges, control 1713
 - activated sludge + fluidized beds 1724
 - aerobic treatment + anaerobic treatment, bioreactors 1716
 - anaerobic treatment, reviews 735
 - biological filtration, upflow 1696
 - biological treatment
 - activated sludge 1426
 - mathematical models, settlement 1711
 - phosphorus, addition 1712
 - organic compounds, removal, reviews 732
 - reviews 1729
 - phenolic compounds, biodegradation, anaerobic treatment 600
- waste water treatment, upgrading, Scotland 730
- wastes, vermicomposting, Spain 3296

Pulp mill effluent

- activated sludge, Sweden 1710
- anaerobic treatment, aerobic treatment, phenolic compounds, biodegradation, bioreactors 1699
- biodegradation, biological treatment, activated sludge 1725
- biological fixed-film systems, chemical oxygen demand, removal 1708
- biological treatment
 - activated sludge 1726
 - activated carbon, addition 1727
 - bioreactors, performance 1728
 - air, emissions, heat treatment, condensates, addition, effects 1706
 - aquatic plants 1357
 - bioreactors, fluidized beds 1733
 - comparisons, Canada 1703
 - wetlands, constructed 1356
 - bisulfites, anaerobic treatment, biogas, production 1718
 - chlorates, biodegradation, biological fixed-film systems, anaerobic treatment 1715
- dechlorination
 - physiology 3777
- Streptomyces*, physiology 3777
- decolorization
 - anaerobic treatment + sodium hypochlorite 1720
- biological treatment, *Coriolus versicolor* 2659
- Trametes versicolor* 2661
- Trametes versicolor* 1701

Pulp mill effluent *cont.*

- organic halogen compounds
 - biodegradation, bioreactors, aerobic conditions 1709
 - removal, biological treatment, lagoons, aeration, New Zealand 1704
- organic sulfur compounds, anaerobic treatment, toxicity, control 1721
- organochlorine compounds

- removal
 - anaerobic treatment + ultrafiltration 2655
 - biological treatment, biomass, temperature 1732

- phenols, removal, biological treatment, bioreactors, fluidized beds 1734
- pretreatment, biological treatment, aerobic treatment, enhancement 1705
- resin acids, biodegradation, lagoons, New Zealand 1700
- treatment, biological fixed-film systems + activated sludge, Sweden 1702
- waste water treatment, anaerobic treatment 3776

Pulps, bleaching, effluents, biological treatment 1737**Pulses**, stored products pests, *Callosobruchus chinensis* 906**Purine**, biodegradation, *Paracoccus denitrificans* 513**Purines**, biodegradation, microorganisms 1434***Pycnoporus coccineus***, aromatic hydrocarbons, lignin, biodegradation 2493***Pycnoporus sanguineus***, wheat straw, biodegradation, enzymes, production 2752**Pyrene**, biodegradation, *Aspergillus niger* 2517**Pyridine**

- biodegradation
 - Alcaligenes* 1431
 - Pimelobacter*, techniques, immobilization, assessment 1824

Pyridines

- biodegradation
 - sediment 2650
 - soil flora 2261

Pyrites

- mine spoil, iron, bacterial leaching, bacteria, cobalt, effects 2670

oxidation**cobalt****separation**

Thiobacillus ferrooxidans

1754

Thiobacillus thiooxidans 1754

Thiobacillus ferrooxidans 2602

Thiobacillus ferrooxidans, adhesion 3794-3795

Pyrobaculum aerophilum, nitrates, reduction, sea water, boiling, Italy 3864**Pyrocatechol**

- biodegradation, *Pseudomonas putida*, catechol 2,3-dioxygenase, characterization 2250

- production, aromatic hydrocarbons, utilization, *Rhodococcus rhodochrous* 570

Pyrococcus furiosus

- sulfur
 - reduction 2614
 - enzymes 3679

Pyrophosphates, antibacterial properties, poultry, carcasses, chilling, *Salmonella*, control 2988**Pyruvic acid**

- fermentation, sulfate reducing bacteria, acetates, production 652
- utilization, *Methanosarcina barkeri*, methane production 515

Quaternary ammonium compounds, *Staphylococcus*, resistance, foods, nucleotide sequences 3110**Quinoline**

- biodegradation
 - biofilms, mathematical models 2442
 - bioreactors, *Comamonas acidovorans*, immobilization, glass, beads 3616

Quinoline *cont.*

- biodegradation *cont.*
 - Cunninghamella elegans* 1484
 - Pseudomonas putida* 2582

Quinolines

- biodegradation
 - Arthrobacter* 560
 - rivers, sediment, anaerobic conditions 505

Radiation

- buffalow meat, low temperature storage, microbial flora, control 220
- resistance
 - meat, pathogens, control 1875
 - spacecraft, microorganisms, control 234

Radioactive wastes, caesium, bioremediation, *Chlorella salina*, salinity 2262**Random amplified polymorphic DNA**, foods, *Listeria monocytogenes*, dna amplification 2882**Rape**, oils, production, phytic acid, hydrolysis, *Aspergillus carbonarius* 1401**Rapid methods**, detection, poultry, feeds, *Salmonella* 1969**Rare earth elements**, sorption, *Ganoderma lucidum* 2601**Raw milk**

- Bacillus*, recovery, techniques, heat treatment, culture techniques 158
- bacterial count, techniques, plate count, luminescence, ATP, comparisons 159

Recycling

- biological treatment, agricultural wastes, refuse, Norway 3358
- polyethylene, biodegradation 1549
- starch, biodegradation 1549

Redox potential

- monitoring
 - sewage sludge, anaerobic treatment, aerobic treatment, bioreactors 1378
 - sludges, anaerobic treatment, aerobic treatment, bioreactors 1378

Reducing agents, milk, *Listeria monocytogenes*, heat injury, recovery 2202**Reed beds**

- aquatic plants, bioremediation, reviews 1843
- constructed, refuse, landfill leachates, biological treatment 1363
- denitrification, sewage, Germany 1623
- gravel, dyes, waste water, biological treatment 1355
- wetlands, sewage, biological treatment, Japan 1335

Reference materials

- feeds, contamination, aflatoxins 899
- microbiology
 - gram negative bacteria, dessication, techniques, determination, stability 3906
 - gram positive bacteria, dessication, techniques, determination, stability 3906

Refrigeration

- potassium sorbate
 - beef, *Listeria monocytogenes* 2091
 - sausages, *Listeria monocytogenes* 2091
- poultry, skin, microbial contamination, South Africa 2063
- sodium nitrate
 - beef, *Listeria monocytogenes* 2091
 - sausages, *Listeria monocytogenes* 2091

Refuse

- agricultural wastes, recycling, biological treatment, Norway 3358
- anaerobic digestion
 - methane production, enzymes 763
 - start-up, methane production 2344
- anaerobic treatment, volatile fatty acids, production 2692
- biodegradation
 - landfills
 - settlement, mathematical models 2365
 - sewage sludge, soil, covers, enhancement 2696

Refuse *cont.*

- biodegradation *cont.*
 - measurement, methodology, Italy 2243
 - Trichoderma longibrachiatum*, cellulase, activity 2768
- biological treatment, anaerobic digesters, biogas, production, USA 3353
- burning, ash, heavy metals, immobilization, landfills, *Desulfovibrio desulfuricans* 3374
- composting
 - Australia 3282
 - costs, reviews 352
 - Germany 3294
 - Nigeria 355
 - USA 365, 2305
- 2,4-D, biodegradation, composting 3630
- disposal, moulds, growth, control 2361
- industrial wastes, disposal, legislation, European Communities 454
- landfill leachates, biological treatment, reed beds, constructed 1363
- landfills, methane production, assessment, bioassays 2245
- organic matter, biodegradation, composting 356
- sewage sludge
 - composting
 - anaerobic treatment, aerobic treatment, Austria 764
 - Italy 363
 - utilization, biogas, production, anaerobic digestion, methodology, kinetics 484
- vermicomposting, North America 1252
- volatile compounds, gases, biological treatment, determination, GC/MS 1153
- waste disposal, USA 3815
- wastes, composting, Spain 2310

Relative humidity, *Bacillus cereus*, spores, temperature resistance 1088**Removal**

- ammonia, *Escherichia coli*, encapsulation 2743
- urea, *Escherichia coli*, encapsulation 2743

Reovirus, epidemiology, water pollution, rivers, Japan 2225**Reports**, foods, microbial contamination 826**Reservoirs**

- coliform bacteria, growth, *Cupressus macrocarpa*, leaves, effects 211
- eutrophication, Czech Republic 1128
- phenols, biodegradation, algae, blooms, Russia 1532
- waste water
 - faecal coliforms, survival, *Lemna gibba*, effects 3338
 - storage, microbial contamination, Israel, physico-chemical parameters, effects 3373
- waste water treatment, water reuse, irrigation, Israel 417
- water pollution, *Microcystis*, bacterial toxins, *Daphnia*, toxicity 1804

Resin acids, biodegradation, pulp mill effluent, lagoons, New Zealand 1700**Resorcinol**

- biodegradation
 - Alcaligenes faecalis* 2540
 - Candida tropicalis* 2540

Review

- metals
 - oxidation, microorganisms 657
 - reduction, microorganisms 657
- waste water
 - biological treatment
 - application to land 1169
 - ponds 1169
 - wetlands 1169

Reviews

- acetates
 - production, bacteria 1799
 - utilization, methane production, microorganisms 485
- activated sludge, microbial flora 1864
- agricultural wastes, biological treatment 1757

Reviews cont.

- aliphatic hydrocarbons
 - soil pollution, bioremediation 3207
 - water pollution, bioremediation 3207
- anaerobic digestion, sludges, application to land 3370
- aromatic compounds, biodegradation, microorganisms, USSR 2440
- azo compounds
 - biodegradation
 - bacteria 1598
 - fungi 1598
 - helminths 1598
- Bacillus cereus*, toxins 1953
- bacteria
 - biofilms, biofouling 3039
 - endotoxins, structure activity relationships 892
 - inoculation, soil, genetically engineered microorganisms 801
- bacterial leaching, mathematical models 2677
- biodegradation 286
 - biofilms 3869
- biodeterioration, biofilms 3869
- biofilms, microbial flora 1864
- biofouling 1868
- biological fixed-film systems 1265
- bioremediation 3210
- biosurfactants, bioremediation 2578
- butanediol, production, fermentation, bacteria 2473
- cattle slurry, composting, UK 1256
- cellulose, biodegradation, *Phanerochaete chrysosporium*, enzymes 557
- cheeses, pathogens 177
- chemical industry, waste treatment 1686
- chlorinated ethenes, biodegradation, groundwater, bacteria 3482
- chlorinated organic compounds, biodegradation, anaerobes 1801
- Clostridium*, biotechnology, applications 1866
- composts, utilization, Australia 3295
- contaminated land, bioremediation 284
- cyanide, biodegradation 3678
- dairy industry, wastes, biological treatment 708
- denitrification
 - bacteria 1648
 - sewage, biological treatment 1643
- dyes
 - biodegradation
 - bacteria 1598
 - fungi 1598
 - helminths 1598
- effluents, anaerobic treatment 429
- eggs, contamination, *Salmonella enteritidis* 1793
- Escherichia coli*
 - enzymes
 - formate dehydrogenases, production 1101
 - hydrogenases, production 1101
 - nitrate reductase, production, genetics 1100
- epidemiology 2180
- isolation 2180
- feeds
 - maize, contamination, fumonisins, USA 896
 - microbial contamination, UK 1967
- ferrous sulfate, oxidation, *Thiobacillus ferrooxidans* 2604
- food
 - Listeria monocytogenes*, control 864
 - microbial contamination, control, irradiation 2143
- food microbiology, mathematical models 242
- food preservatives 54
- food processing, waste treatment 1669
- food safety
 - assessment 847
 - microbial contamination, food industry, techniques, control 1931
- foodborne diseases
 - Campylobacter jejuni* 1108
 - Clostridium botulinum*, USA 2817
 - enterobacteriaceae 844
 - food handlers, pathogens, USA 2831

Reviews cont.

- foodborne diseases cont.
 - food hygiene, pathogens, USA 2831
 - hepatitis A virus 846
 - immunopathology 5
 - pathogens, detection 875
 - trends
 - Europe 1873
 - North America 1873
- foods
 - Bacillus cereus* 3118
 - fungi, identification 2214
 - lactic acid bacteria, bacteriocins, production 214
 - maize, contamination, fumonisins, USA 896
 - microbial contamination
 - control, irradiation 1943
 - pathogens, control, irradiation 1036
 - sampling 32
 - modified atmosphere storage, carbon dioxide 1925
 - moulds, detection, immunoassay 1929
 - mycotoxins 1960
 - pathogens, bacteria, sampling, enumeration 2921
 - Salmonella*, detection 37
 - spoilage, microorganisms 2910
 - fruit, postharvest decay, control 926
 - fruit juices, production, microbial contamination 1996
 - fuels, liquids, production, microorganisms 3400
 - gases, hydrogen sulfide, removal, biological treatment 2606
 - grain stores, ecosystems 76
 - halogenated hydrocarbons, biodegradation, microorganisms 3432
 - heavy metals
 - uptake, biomass, fungi 1570
 - water, bioremediation 3655
 - herbicides, biodegradation, environmental impact 1555
 - historic buildings, biodeterioration, plants 2221
 - industrial wastes
 - biological treatment 3249
 - effluent, pretreatment, biological treatment 1862
 - treatment, biotechnology 693
 - Lactobacillus*, strains, characterization 46
 - lamb (meat), microbial contamination, pathogens 2983
 - Legionella pneumophila*, virulence 13
 - lignin, biodegradation, *Phanerochaete chrysosporium*, enzymes 557
 - lignocellulosic wastes, biodegradation, biotechnology 534
 - Listeria*, detection, identification 2788
 - Listeria monocytogenes*, resistance, food safety 4
- meat
 - Campylobacter coli*, monitoring, USA 2818
 - Campylobacter jejuni*, monitoring, USA 2818
 - Escherichia coli*, monitoring, USA 2818
 - Listeria monocytogenes*, monitoring, USA 2818
 - surfaces, bacteria, adhesion, mechanisms 2973
- meat products, microbial contamination, phosphates, antimicrobial properties 2971
- metals, removal, cyanobacteria, wetlands 3652
- methane production, bacteria, metabolism 1798
- microbial corrosion 1868
- microorganisms
 - adhesion, surfaces, biotechnology 3823
 - biomass, soil, analytical methods, estimation 812
 - caesium, uptake, toxicity 3676
 - hyperthermophilic, metabolism 1802
- milk
 - Campylobacter jejuni* 168
 - Escherichia coli* 170

Reviews cont.

- milk cont.
 - Listeria monocytogenes* 171
 - Mycobacterium tuberculosis* 172
 - Salmonella* 169
 - Staphylococcus aureus* 166
 - Streptococcus agalactiae* 167
- milk products, *Escherichia coli* 170
- minerals
 - biodegradation
 - bacteria
 - iron
 - oxidation 3791
 - reduction 3791
- motor cars, production, waste treatment 1756
- mushroom compost, production 350
- nitrate (esters), biodegradation, microorganisms 2434
- nitrification
 - Nitrobacter* 1647
 - Nitrosomonas* 1647
 - sewage, biological treatment 1643
- nutrients, removal, activated sludge, bacteria, filaments, formation 1312
- oilfields, microbially enhanced oil recovery 725
- organic compounds
 - biodegradation
 - bioreactors, biofilms, structure, mass transport 2284
 - microorganisms, surfactants 2402
- organic nitrogen compounds, aromatic compounds, biodegradation, microorganisms 3480
- organic wastes, vermicomposting 3300
- paints, thickeners, biodeterioration, cellulases 198
- pathogens, foodborne diseases 843
- pesticides, biodegradation, environmental impact 1555
- petrochemical industry, waste water, biological treatment, Israel 1692
- petroleum, soil, bioremediation 3540
- petroleum hydrocarbons
 - polluted soils, bioremediation 3218
 - soil pollution, bioremediation 3207
 - water pollution, bioremediation 3207
- phenol, biodegradation 3580
- plant residues, biodegradation, biogas, production 3395
- plastics, biodegradable 1545
- pollutants
 - biodegradation
 - Phanerochaete chrysosporium* 307
 - wood destroying fungi 307, 3205
- polluted soils, bioremediation 284, 3244
- pollution
 - bioremediation 3213, 3231
 - chromium
 - soil, bioremediation 648
 - water, bioremediation 648
 - petroleum hydrocarbons, bioremediation 3204
 - polycyclic hydrocarbons, bioremediation 2259
- polychlorinated biphenyls, biodegradation, aerobic conditions 3481
- polyphenols, biodegradation, microorganisms 598
- porphyrins, bioremediation 3208
- poultry
 - Campylobacter coli*, monitoring, USA 2818
 - Campylobacter jejuni*, monitoring, USA 2818
 - Escherichia coli*, monitoring, USA 2818
 - Listeria monocytogenes*, monitoring, USA 2818
 - wastes, anaerobic digestion, research, USA 756
- poultry meat, contamination, *Salmonella enteritidis* 1793
- pulp and paper industry
 - effluents, waste treatment 1695
 - waste water
 - anaerobic treatment 735
 - biological treatment 1729
 - organic compounds, removal 732

Reviews cont.

- reed beds, aquatic plants, bioremediation 1843
- refuse, composting, costs 352
- Salmonella*, food safety, techniques, identification 2822
- seafoods, *Listeria monocytogenes* 2016
- sewage
 - biofilms, heterotrophic microorganisms 1822
 - biological treatment, biological filtration, upward flow 1260
 - composting, application to land 351
 - nitrates, removal, *Acinetobacter* 3707
 - phosphates, removal, *Acinetobacter* 3707
 - treatment, Slovakia 1772
- sewage sludge, composting, USA 1244
- sewage sludge disposal
 - application to land, Germany 2691
 - composting, Germany 2691
- shellfish, contamination, viruses 2969
- shrimps
 - microbial contamination
 - Ecuador 939
 - India 939
 - Malaysia 939
 - Philippines 939
 - USA 939
- sludges
 - anaerobic digestion 1170
 - composting 1170
- spices, herbs, microbial contamination 1985
- substrates, transformation, enhancement, microorganisms, consortia, immobilization 3821
- sulfur
 - reduction, thermophilic microorganisms, metabolism 1802
 - removal
 - gases, microorganisms 3681
 - liquids, microorganisms 3681
- surfactants
 - biodegradation 3648
 - biological treatment 1568
 - environment 1568
 - production, bacteria, biotechnology 3546
- toxic substances, waste treatment 1661
- toxins, production, algae 3133
- trichloroethene, biodegradation, bacteria 3483
- vegetables, postharvest decay, control 926
- viruses
 - foods 1072
 - water 1072
- wall paintings, biodeterioration, fungi 2108
- waste treatment, Chlorophyta 333
- waste water
 - anaerobic digestion 2349
 - biological treatment 327
 - aerobic conditions
 - bacteria, methane production 1196
 - sulfate reducing bacteria 1196
 - biological filtration, upward flow 1260
 - biological fixed-film systems 1278
 - fluidized beds 1182
 - denitrification, biological treatment 1646
 - nitrification, biological treatment 1646
 - nitrogen, removal, activated sludge 1298
 - sulfates, anaerobic treatment 2638
- waste water treatment
 - biofilms, characterization, activity 3254
 - denitrification, microorganisms, immobilization, mathematical models 3715
 - disinfection 1055
 - Hungary 1773
 - organic compounds, emission, control, USA 1171
 - performance, models 1179

Reviews cont.

- waste water treatment cont
 - plant design
 - automation 1172
 - optimization 1172
- wastes
 - anaerobic treatment 1220
 - biodegradation, biogas, production 3395
 - biological treatment, aerobic treatment 1209
 - composting 2790
 - application to land 351
 - UK 2291
 - USA 3287
- water
 - microorganisms, detection 3190
 - pathogens, detection 838
 - toxins
 - pathogens, immunodetection 3189
 - rotavirus, immunodetection 3189
 - water purification, Hungary 1773
 - waterborne diseases, Scandinavia 2900
 - wetlands, constructed, water pollution, control 1330
 - xylan, biodegradation, enzymes, complexes 543
- Rhinovirus**, surfaces, disinfection 2160
- Rhizobium**
 - enzymes, organophosphorus pesticides, biodegradation, soil 625
 - phosphonic acids, biodegradation, volatile compounds, production, lyases 2411
 - rock phosphate, solubility 1592
- Rhizomucor pusillus**, growth effects, starch, biodegradation, amylases, production 3604
- Rhizopus**
 - cassava, fermentation, glucoamylase, production 1406
 - control, chemicals 2157
 - melons, microbial contamination, control 1926
- Rhizopus arrhizus**, biomass, heavy metals, sorption 3665
- Rhizopus delemar**, polyesters, biodegradation, enzymes, triacylglycerol lipase 2564
- Rhizopus nigricans**, biomass, heavy metals, sorption 3665
- Rhizopus oryzae**, bioreactors, cadmium, removal, waste water 1583
- Rhodobacter capsulatus**
 - malonic acid, biodegradation, anaerobic conditions 2397
 - nitrophenols, biodegradation, reductases, inactivation, blue light 2723
- Rhodobacter sphaeroides**, isolation, denitrification, lagoons, sludges, characterization 1823
- Rhodococcus**
 - atrazine
 - biodegradation
 - biochemical pathways 3620
 - genetic analysis 3619
 - 1,2-butanediol, biodegradation, 2-hydroxybutyric acid, production 3381
 - caesium, sorption, soil, bioaccumulation 3662
 - desulfurization, genes, characterization 3829
 - EPTC
 - biodegradation
 - biochemical pathways 3620
 - genetic analysis 3619
 - soil 3628
 - genes, aromatic hydrocarbons, desulfurization, techniques, identification, genes, cloning 3570
 - soil, metatriton, biodegradation 1565
 - sulfonamides, biodegradation 500
- Rhodococcus (bacteria)**
 - α -cedrene, oxidation 2398
 - immobilization, activated carbon, alginates, phenols, biodegradation 2535
 - plasmids, genetic engineering 1791
- Rhodococcus chlorophenolicus**
 - chlorophenol, biodegradation, activated sludge, techniques, quantification,

Rhodococcus chlorophenolicus cont.

- chlorophenol, biodegradation, activated sludge, techniques, quantification, immunofluorescence microscopy cont.
- immunofluorescence microscopy 3576
- pentachlorophenol, biodegradation 2543
- Rhodococcus erythropolis**
 - amino acids, biodegradation 3847
 - caesium, sorption, soil, bioaccumulation 3662
 - fatty acids, utilization, kinetics 2407
 - haloalkanes, biodegradation, enzymes 3434
 - hydrocarbons, utilization, kinetics 2407
- Rhodococcus fasciens**, limonin, biodegradation, immobilization 609
- Rhodococcus globerulus**, polychlorinated biphenyls, biodegradation, genes 1533
- Rhodococcus rhodochrous**, inoculation, water purification, biological treatment, activated carbon, beds 1747
- Rhodococcus rhodochrous**
 - aromatic hydrocarbons, utilization, pyrocatechol, production 570
 - cumene, biodegradation 1428
 - enzymes, acrylamides, production, biotechnology 771
 - fatty acids, utilization, kinetics 2407
 - halogenated hydrocarbons, biodegradation, enzymes 518
 - hydrocarbons, utilization, kinetics 2407
- Rhodococcus ruber**, organochlorine compounds, biodegradation 1442
- Rhodococcus rubra**, kinetics, activated sludge, foams, formation 396
- Rhodocyclus gelatinosus**
 - growth rate, seafoods, waste water 2359
 - waste water, contamination, characterization 1908
- Rhodopseudomonas**
 - dairy effluent, utilization, hydrogen, production 1407
 - sugar factory waste, utilization, hydrogen, production 1407
- Rhodopseudomonas palustris**
 - aromatic hydrocarbons, biodegradation, hydrogen, production 581
 - biochemical pathways, benzoate, biodegradation 3437
- Rhodopseudomonas sulfidophila**, organic sulfur compounds, biodegradation, marshes 3506
- Rhodospirillum rubrum**
 - soybeans, curd, waste water, biological treatment 459
 - soybean products, curd, waste water, utilization, proteins, production 459
- Rhodothermus marinus**, xylan, biodegradation, enzymes 3873
- Rhodotorula glutinis**
 - chlorophenol, biodegradation 3585
 - phenols, biodegradation 3585
- Rhodotorula minuta**, control, marble, discoloration, biocides, Italy 203
- Rhodotorula rubra**, cyanide, degradation, ammonia, utilization 2631
- Rhyzopertha dominica**, control, gamma radiation, grain legumes 2144
- Rice**, stored products pests, fatty acids, temperature 81
- Rice straw**
 - biodegradation
 - Aspergillus niger*
 - cellulase, production 3532
 - xylanase, production 3532
 - Coprinus cinereus* 1464
 - Cyathus* 2477
 - ethanol production, fungi 2388
 - Pleurotus sajor-caju* 1464
 - Trichoderma longibrachiatum* 1464
 - Trichoderma reesei*+*Pleurotus sajor-caju* 2496
 - Trichoderma viride* 1464
 - saccharification
 - cellobiase+cellulases, ethanol production 1474
 - Schizophyllum commune*, cellobiase, supplementation, cellulases, fungi 1833

Risk assessment

food, microorganisms 2821
methodology, pathogens 1897
techniques, drinking water, enteric viruses, South Africa 2892

Rivers

aquatic plants, nutrients, levels 1604
coliform bacteria, concentration, models 1077
diatom, blooms, Canada 2229
effluent discharge, nutrients, levels 1604
Eichhornia crassipes, heavy metals, uptake, Zimbabwe 2587

Escherichia coli

isolation 1889
microbial contamination, Canada 1136

faecal coliforms, microbial contamination, Canada 1136

linear alkylbenzenesulfonates, biodegradation, biofilms, Japan 1569

microbial contamination

faecal coliforms, mathematical models 1127

indicator species, mathematical models, Canada 1126

nitrification, Jordan, mathematical models 1656

nutrients, removal, wetlands, constructed, Australia 1348

organic matter, biodegradation, biofilms, mathematical models 345

phenols, biodegradation, algae, blooms, Russia 1532

Pseudomonas aeruginosa, microbial contamination, Canada 1136

sediment

methylquinoline, biodegradation, anaerobic conditions 505

microorganisms, polychlorinated biphenyls, biodegradation, USA 2463

polychlorinated biphenyls

biodegradation
bacteria, genes, Germany 3199
microorganisms, Germany 3435

quinolines, biodegradation, anaerobic conditions 505

slaughterhouse waste, discharge, microbial contamination, Nigeria 3143

waste water, organic matter, biodegradation, Germany 3362

waste water treatment, catalases, enzyme activity, monitoring 1208

water

hepatitis A virus, detection, polymerase chain reaction 3187

pathogens, survival, techniques, monitoring 3148

viruses, survival, techniques, monitoring 3148

water pollution

India, techniques, detection, indicator species, *Escherichia coli* 1125

reovirus, epidemiology, Japan 2225

Yersinia enterocolitica, isolation 1889

Yersinia pseudotuberculosis

Germany, isolation 1910

isolation 1889

Japan, isolation 1910

RNA phages

indicators species, pathogens, assessment 2860

replication, environment 2860

Rock phosphate

solubility

Aspergillus, soil alkalinity 1591

Bradyrhizobium 1592

Rhizobium 1592

utilization, Actinomycetales, isolation, worm casts, Nigeria 692

Rosmarinus officinalis

production, antibacterial agents, *listeria monocytogenes*, inhibition 231

Rotating biological contactors

activated sludge

ciliates, biomass, biofilms, monitoring 1841

Rotating biological contactors cont.

activated sludge cont.

hydrocarbons, biodegradation, petrochemical industry, waste water, comparisons 1508

anaerobic conditions, waste water treatment 2357

anaerobic treatment, aerobic treatment, nitrification, denitrification, sewage, Japan 2358

biofilms

azo compounds, biodegradation, aerobic treatment 1597

dissolved oxygen concentration, sewage, biological treatment, determination, microelectrodes 1394

evaluation 444

properties 441

structure, pores, analysis 1392

biological filtration, sewage, comparisons 1207

biological fixed-film systems, pentachlorophenol, biodegradation, fungi 3575

biological treatment, aircraft, paints, stripping, waste water, microbiology 2678

colloids, biodegradation, mathematical models 1395

design, optimization, models 442

nitrification

biofilms, phosphorus, effects 1391

denitrification, sewage 1393

organic compounds, nitrification, denitrification, waste water, synthetic 1393

polluted soils, anthracite waste, biological treatment 3459

sewage, biological treatment 443

upgrading, waste water, biological treatment 1396

Rubber

Listeria monocytogenes, survival 2109

Salmonella typhimurium, survival 2109

Rubber industry

effluents, biodegradation,

Acinetobacter, kinetics 1752

Rumen microorganisms

bagasse, biodegradation, anaerobic digestion, methane production 2471

maize bran, biodegradation, anaerobic digestion, methane production 2471

Runoff

sewage, sewerage, microbial flora, urban areas, UK 3174

treatment, wetlands, constructed, Australia 1342

Russia

groundwater

oilfields

iron reducing bacteria, occurrence 3404

sulfate reducing bacteria, occurrence 3404

phenols

biodegradation

algae

blooms

reservoirs 1532

rivers 1532

surface water, pollution, sewage, water quality, criteria 3141

Saccharomyces, molasses, ethanol production, inhibition, supplements, control 478

Saccharomyces cerevisiae

apple juice, fermentation, ethanol production 3376

2,3-butanedione, biodegradation 1677

cadmium, zinc, uptake 2767

carobs, pods, fermentation, ethanol production 1416

control

culture media, water content, sorbic acid 3051

heat treatment, processed foods, strawberries, contamination 931

copper, uptake, cations, release 807

enzymes

lactose, fermentation, genetic engineering 3766

Saccharomyces cerevisiae cont.

enzymes cont.

production, genetics, gene sequencing 1828

gene expression, *Aspergillus aculeatus* + cellulase 2766

genetic improvement, *Caldocellum saccharolyticum*, gene transfer, xylanase, production 1831

growth

ethanol, effects 3126

fructose, effects 3126

pH, effects 3126

heavy metals

bioaccumulation, protein, effects 646

sorption 2592

uptake 644, 1573, 3650

inactivation, foods, electrical treatment, temperature 874

insecticides, sulfur, biodegradation 2573

isolation

alcohols, production, characterization 3131

beverages, production, characterization 3131

molasses, utilization, invertase, production 2381

orange juice, chemical composition, fermentation 1999

rice straw, biodegradation, ethanol production 2388

sorghum, residues, carbohydrates, utilization, ethanol production 3612

starch, hydrolysis, enzymes 1547

survival, genetic engineering, risk assessment 2779

uptake, effluents, heavy metals, removal, filtration 3667

wheat straw, utilization, single cell protein, production 458

xylose, metabolism 2754

Saccharomyces cerevisiae + *Zymomonas*

mobilis, ethanol production, paddy malt mash 469

Sago, industrial wastes, waste water treatment, bioreactors 2286

Salad dressings, *Escherichia coli*, survival, temperature 1988

Salads

contamination

pathogens

Enterobacter cloacae 923

Klebsiella pneumoniae 923

Proteus morganii 923

Listeria monocytogenes, growth, survival 935

microbial contamination, hospital food service, food hygiene, assessment, Costa Rica 2828

potatoes, food poisoning, *Clostridium botulinum*, USA 2947

prepared foods

microbial contamination, UK 99

yeasts, UK 99

Salicylic acids, production, naphthalene, biodegradation, *Pseudomonas fluorescens* 568

Salinity

bioremediation, radioactive wastes, caesium, *Chlorella salina* 2262

lichenysin A, production, *Bacillus licheniformis* 3638

Salmon

carcasses, fish farms, composting, aeration 2309

Clostridium botulinum, spores, toxicity, control, sodium lactate, temperature 1073

processing, microbial contamination, *Listeria monocytogenes*, Norway 2954

Salmonella

antigen antibody reactions 243

bacterial count, sludges, application to land, enumeration, comparisons 1907

bean sprouts, Thailand 1979

beef, detection, polymerase chain reaction 3

bottled water, contamination, detection, Canada 917

chicken, skin, detection 151

Salmonella *cont.*

- chicken meat
 - detection, polymerase chain reaction 48
 - Thailand 152
- chickens
 - carcasses
 - Brazil 2064
 - washing, waste water, detection, immunoassay 1845
- chocolate, contamination, Mexico 2937
- control
 - feeds
 - contamination
 - heat treatment 73
 - pressing 73
 - foods, disinfectants 3062
 - lactic acid, pigs, carcasses 979
 - poultry, carcasses, chilling, pyrophosphates, antibacterial properties 2988
 - detection, culture media 2874
 - differentiation, culture media 868
 - dried milk, detection, enzyme immunoassay 42
 - dried skim milk
 - detection 881
 - immunomagnetic separation 2096
 - eggs, microbial contamination 2077
 - feed of animal origin, contamination, techniques, isolation, Turkey 74
 - feeds
 - contamination
 - Germany 69
 - isolation, comparisons 878
 - detection, standards 2
 - food
 - contamination, Netherlands 7
 - microbial contamination
 - hygiene 850
 - storage 850
 - food contamination, identification, probes 2193
 - food safety, techniques, identification, reviews 2822
 - foods
 - contamination
 - detection 39
 - culture media 2912
 - immunoassay 883
 - isolation, comparisons 878
 - detection 51, 881, 2775
 - antigen antibody reactions 1084
 - assays 1939
 - enzyme immunoassay 42
 - immunodiffusion tests
 - Canada 1934
 - USA 1934
 - peptone 1940
 - reviews 37
 - standards 2
 - Malaysia 1885
 - plate count, culture media, agar 2870
 - fresh water, sediments, enumeration 1905
 - identification, rapid methods 49
 - low fat cheese 180
 - meat
 - detection
 - DNA probes 2972
 - immunodiffusion tests
 - Canada 1934
 - USA 1934
 - microbial contamination, China 130
 - organs, Spain 2034
 - meat products, microbial contamination, China 130
 - microbial contamination, food, cook-chill system, Malaysia 1945
 - milk
 - detection 2084
 - reviews 169
 - oysters, detection, polymerase chain reaction 2961
 - paprika, microbial contamination, Germany 1986
 - pigs, carcasses, abattoirs, equipment, contamination, Canada 1025
 - poultry
 - carcasses, Spain 89
 - feeds, detection, rapid methods 1968-1969

Salmonella *cont.*

- poultry *cont.*
 - microbial contamination, health hazards 2069
- poultry meat, detection 881
- poultry products, Thailand 152
- recovery, isolation, foods, culture techniques, inoculation methods 873
- serotypes
 - detection, flow cytometry, monoclonal antibodies 1859
- food handling, isolation, laboratories, Italy 1085
- poultry manure, identification, polymerase chain reaction 259
- poultry meat, identification, polymerase chain reaction 259
- sewage, ponds, antibiotics, resistance, Morocco 3162
- sewage sludge, techniques, determination 2238
- soil, detection 2776
- survival
 - sewage effluent disposal, sea water 1139
 - waste water, sea water, trehalose, synthesis 1134
- techniques, isolation, comparisons 1891
- turkeys
 - feathers
 - removal
 - microbial contamination 2075
 - processes, comparison 2076
- water
 - detection 2776
 - microbial contamination, *Larus delawarensis*, public health 3227
- Salmonella bovis morbificans**, infant formulae, dried milk, microbial contamination, Italy 2997
- Salmonella choleraesuis**, control, poultry, carcasses, peroxidases, dips 991
- Salmonella enteritidis**
 - acids, tolerance, temperature, effects 3123
 - control
 - egg shell, hot water treatment 1008
 - eggs
 - washing
 - water
 - pH, USA 1096
 - temperature, USA 1096
 - foods
 - disinfectants, p-aminobenzoic acid 2162
 - Mentha piperita*, essential oils 2153
 - eggs
 - contamination, reviews 1793
 - cooling, microbial contamination 2987
 - detection, iron, supplements 1896
 - growth
 - eggs
 - storage 2071
 - heat treatment, resistance 2990
 - pH, sodium chloride 2200
 - heat, tolerance, temperature, effects 3123
 - heat tolerance, determination 2878
 - isolation, foodborne diseases, Turkey, techniques, identification, plasmids 14
 - mayonnaise, microbial contamination 1989
 - phenotypes, eggs, contamination, detection 2995
 - plasmids, analysis, Australia 1879
 - poultry meat, contamination, reviews 1793
 - strains, identification, Germany 2211
 - survival
 - eggs, cold storage, washing, water, pH 1001
 - hands, eggs 1886
 - mayonnaise
 - pH 914
 - temperature 914

Salmonella enteritidis *cont.*

- survival *cont.*
 - surfaces
 - contamination
 - biocides 2854
 - temperature 2854
 - eggs 1886
- Salmonella** + **indicator species**, water, recreational, water quality, health hazards 3139
- Salmonella montevideo**, control, disinfectants, poultry, skin, microbial contamination, assessment 997
- Salmonella senftenberg**, survival, gelatin 901
- Salmonella thompson**, pressure, effects, electron microscopy 3098
- Salmonella typhi**, strains, identification, pulsed field electrophoresis 2212
- Salmonella typhimurium**
 - adhesion, chicken meat, skin, temperature, effects 1005
 - beef, carcasses, decontamination, methodology, comparisons 2044
 - chicken meat
 - skin
 - disinfection
 - chlorine 1007
 - ultrasonic treatment 1007
 - control
 - antibacterial agents, plant oils, *Thymus vulgaris* 1051
 - disinfectants, poultry, skin, microbial contamination, assessment 997
 - electric current, beef 2038
 - electrical stimulation, poultry carcasses 155
 - poultry
 - carcasses
 - disinfectants, keeping quality 1002
 - sodium phosphate 989
 - skin, sodium phosphate 989
 - sodium lactate, beef 135
 - trisodium phosphate
 - beef 136
 - microbial contamination 2149
 - poultry carcasses 155
 - ultrasonics, poultry, carcasses 2078
 - controls, sausages, lactates 2984
 - detection, flow cytometry, dyes 1893
 - disinfection, surfactants, efficiency 1054
 - enrichment
 - detection
 - Escherichia coli*, effects, immunoassay 3108
 - selenium, effects, immunoassay 3108
 - foods, detection, ELISA 2911
 - gene mapping 241
 - growth
 - sucrose, concentration, effects 2192
 - temperature 1076
 - identification, oligonucleotide probes 852
 - inhibition
 - eggs, waste water, mathematical models 999
 - lactoperoxidase, temperature 217
 - pigmeat, acetic acid, temperature 977
 - meat products, microbial contamination, models 2849
 - poultry meat, detection 2774
 - recovery, selenium, effects 3108
 - survival
 - brackish water, sewage, treatment, stabilization basins, pH 294
 - chicken meat, irradiation, water content, sodium chloride, sucrose, effects 3059
 - gelatin 901
 - pigmeat, irradiation, water content, sodium chloride, sucrose, effects 3059
 - rubber 2109
 - stainless steel 2109
- Salmonellae**, crocodiles, farming, waste water, techniques, enumeration, Zimbabwe 1815
- Salmonellosis**, epidemiology, ecology 2196

Salted fish

- Clostridium botulinum*, bacterial toxins, food poisoning, Egypt 2013
- proteinases
- production
- microorganisms
- identification, Egypt 113
- isolation, Egypt 113

Salvinia molesta, ponds, sewage, biological treatment 2271**Sample pretreatment**

- chemicals
- polychlorinated biphenyls
- biodegradation
- water
- Alcaligenes*, aerobic conditions 3449
- Pseudomonas*, aerobic conditions 3449

Samples, environment, *Listeria*, immunological techniques, recovery, beads 1850**Sand**, pentachlorophenol, biodegradation, *Arthrobacter* 596**Sandstone**, ancient monuments, biodeterioration, lichens, Spain 2124**Sardines**, bacteria, histamine, production, measurement 117**Sashimi**

- contamination
- anisakidae, USA 940
- Bacillus cereus*, USA 940
- Staphylococcus aureus*, USA 940

Sauces, meat, storage, microbial contamination, heat treatment 90**Saudi Arabia**

- chicken meat
- carcasses
- keeping quality 150
- microbial contamination 150
- storage life 150
- sea water, petroleum hydrocarbons, biodegradation, nutrients 3548
- sewage effluent, biological filtration 1270

Sausage

- fermentation
- volatile compounds
- formation
- starter cultures
- Pediococcus peutosaceus* 147
- Staphylococcus xylosus* 147

Lactobacillus sake, characterization 244**Sausages**

- bacteria
- packaging 143
- survival, cooking, cold storage 142
- Campylobacter jejuni*
- survival
- cold storage 984
- vacuum packaging 984
- contamination, *Listeria monocytogenes*, techniques, isolation 126
- fermentation
- Staphylococcus carnosus*, starter cultures, *Staphylococcus aureus*, contamination, detection 1899
- yeasts, moulds, Italy 2060
- keeping quality, microbial flora, storage, temperature 2057

Lactobacillus

- histamine, production, pH 1086
- identification 144
- taxonomy 144
- tyramine, production, pH 1086
- Lactobacillus plantarum*, bacteriocins, production 2172
- Lactobacillus sake*, bacteriocins, characterization 987

Leuconostoc

- identification 144
- DNA-DNA hybridization 981
- taxonomy 144
- Listeria*, USA 145
- Listeria monocytogenes*
- Canada 146
- control, carrot juice 2156
- refrigeration
- potassium sorbate 2091
- sodium nitrate 2091

Sausages cont.

- microbial contamination
- Germany 148
- Yersinia* 2062
- microbial flora
- characterization, Greece 983
- packaging 143
- moulds, cultures, protection 2174
- pathogens, controls, lactates 2984
- production
- Campylobacter jejuni*, survival 984
- microbial contamination, variation 985
- spoilage
- Brochothrix thermosphacta*, detection, antibodies, UK 2058
- vacuum packaging, lactic acid bacteria, plasmids 2970
- Staphylococcus xylosus*, antimicrobial activity, *Listeria monocytogenes*, control 988
- Yersinia enterocolitica*
- survival
- sodium nitrite 986
- starters 986

Sawdust

- composts, stability, microorganisms, indicators 2295
- plant growth regulators, biodegradation, microorganisms, composting 1239

Sawmilling, losses, insect pests, Coleoptera 187**Scallops**, toxins, variation, USA 2959**Scandinavia**

- Gram negative bacteria, tetracycline, resistance, sediment, marine environment 3043
- waterborne diseases, reviews 2900

Scanning electron microscopy, bioreactors, anaerobic treatment, biofilms, inoculum 1222*Scenedesmus*, heavy metals, uptake, tannery waste, anaerobic digestion 1586*Scenedesmus bicellularis*, immobilization, waste water treatment, nutrients, removal 2274*Schizophillum commune*, galactoglucanans, biodegradation, enzymes 538*Schizophillum commune*, rice straw, saccharification, cellobiase, supplementation, cellulases, fungi 1833*Schoenoplectus validus*, dairy effluent, biological treatment, wetlands, constructed, New Zealand 1340**Schools**, wells, microbial contamination, hepatitis A, waterborne diseases, Italy 2836*Schwanniomyces occidentalis*, enzymes, production, optimization, starch, biodegradation, culture media, toxicity 1826*Scirpus acutus*, pulp mill effluent, biological treatment 1357*Scirpus lacustris*, reed beds, bioremediation, reviews 1843**Scotland**, pulp and paper industry, waste water treatment, upgrading 730**Sea water**

- boiling, nitrates, reduction, *Pyrobaculum aerophilum*, Italy 3864
- coastal areas
- sewage effluent disposal
- Pseudomonas aeruginosa*
- plasmids
- antibiotics, resistance, Spain 3155
- arsenic, resistance, Spain 3155
- heavy metals, resistance, Spain 3155
- viruses, indicator species 3138
- Staphylococcus aureus*, techniques, recovery, culture media 3159
- water pollution, bacterial count, Australia 3150
- contamination, sewage effluent disposal, swimming, health hazards, South Africa 2833
- enterovirus, Mediterranean sea, DNA probes, polymerase chain reaction, comparison 3891

Sea water cont.

- Escherichia coli*
- detection, *beta*-galactosidase, activity 3125
- survival
- light 274
- natural light, effects 3153
- harbours, microbial contamination, *Vibrio cholerae*, health risk, USA 3031
- microbial contamination, health hazards, Maldives 2834
- petroleum hydrocarbons, biodegradation, nutrients, Saudi Arabia 3548
- pollution
- Escherichia coli*, Brazil 2234
- mucilages
- algae, Italy 1131
- diatoms, Italy 1131
- sewage effluent
- Enterococcus*, inactivation, solar radiation 3168
- faecal coliforms, inactivation, solar radiation 3168
- sewage effluent disposal
- Escherichia coli*, survival 1139
- Salmonella*, survival 1139
- surfactants, biodegradation, techniques, determination 2583
- Vibrio*, survival 2213
- viruses, survival, indicator species, temperature, effects 3154
- waste water, *Salmonella*, survival, trehalose, synthesis 1134

Sea water-piggery effluent, ponds, single cell protein, production, *Spirulina maxima* 3375**Seafoods**

- contamination
- Escherichia coli*, toxins, production, detection, DNA probes, USA 2918
- Listeria monocytogenes*
- England 2028
- Wales 2028
- Shigella dysenteriae*, control, antibiotics, India 2962
- food poisoning
- Gracilaria verrucosa*, Japan 2030
- phytotoxins 1878
- Listeria monocytogenes*
- growth 1920
- reviews 2016
- microbial contamination
- Aeromonas*, isolation, identification 2965
- control, gamma radiation 122
- Escherichia coli*, enterotoxins, production, screening 942
- Italy, monitoring, control 2964
- processing
- waste water
- anaerobic treatment, biological filtration 2318
- biological filtration
- anaerobic conditions, sodium, sulfate, effects 1673
- efficiency 2319
- vacuum packaging, lactic acid bacteria, identification 954
- Vibrio*, enumeration, culture media 120
- Vibrio cholerae*, survival, temperature 2018
- waste water, *Rhodocyclus gelatinosus*, growth rate 2359

Seasonal variation

- Anabaena flos-squae*, lakes, USA 2224
- chickpeas, prepared foods, microbial flora, Jordan 100
- lakes, *Aeromonas*, USA 276

Seawater

- coliform bacteria
- enumeration, culture media 2845
- identification, filters, membranes, errors 2844
- effluents
- Enterococcus*, inactivation, solar radiation 3167
- faecal coliforms, inactivation, solar radiation 3167

Seawater *cont.*

- sewage
 - Enterococcus*, inactivation, solar radiation 3167
 - faecal coliforms, inactivation, solar radiation 3167
 - viruses, detection, polymerase chain reaction 2857

Sediment

- anaerobic conditions
 - heterocyclic nitrogen compounds, biodegradation 1457
 - methylmercury, transformation, sulfate reducing bacteria 3664
 - polychlorinated biphenyls, biodegradation, techniques 3505
- chlorinated phenols
 - biodegradation
 - microorganisms
 - carbonate 3596
 - nitrate 3596
 - sulfate 3596
- contamination
 - organic compounds
 - bioremediation
 - Belgium 3211
 - Netherlands 3211

fuels

- additives
 - alcohols
 - biodegradation
 - Acetobacterium woodii* 1432
 - Eubacterium limosum* 1432
 - esters
 - biodegradation
 - Acetobacterium woodii* 1432
 - Eubacterium limosum* 1432
 - ethers
 - biodegradation
 - Acetobacterium woodii* 1432
 - Eubacterium limosum* 1432
 - ketones
 - biodegradation
 - Acetobacterium woodii* 1432
 - Eubacterium limosum* 1432

marine environment

- Gram negative bacteria, tetracycline, resistance, Scandinavia 3043
- sulfur + ferric hydroxide, metabolism, sulfates, production, chemolithotrophic bacteria 3692
- 2,4,6-tribromophenol, biodegradation, bacteria 3594
- organic compounds, biodegradation, microbial flora, Slovakia 285
- rivers
 - acetates, biodegradation, organic compounds, inhibition, Germany 277
 - surfactants, biodegradation, bacteria, interactions 3637
 - viruses, survival, indicator species, temperature, effects 3154

Seeds

- fungi
 - aflatoxins
 - production
 - temperature, melons, Nigeria 898
 - water activity, melons, Nigeria 898

Selenastrum, heavy metals, uptake, tannery waste, anaerobic digestion 1586**Selenium**

- effects
 - Escherichia coli*, recovery 3108
 - Salmonella typhimurium*
 - enrichment, detection, immunoassay 3108
 - recovery 3108
 - metabolism, biochemistry, *Thauera selenatis* 3697

Selenium *cont.*

- polluted soils, bioremediation, vegetation, management, USA 3695
- removal
 - drainage water
 - ponds, algae + bacteria, USA 3694
 - Thauera selenatis*, USA 3697
 - transformation, microorganisms, environment, anaerobic conditions 3696

Semolina

- irradiation
 - bacteria, control, storage life, extension, India 1037
 - insect pests, control, storage life, extension, India 1037
 - moulds, control, storage life, extension, India 1037
 - packaging, storage, spoilage 1923

Sepiolite

- supports
 - waste water, anaerobic digestion 1233
 - wastes, anaerobic digestion 1233

Septic tank effluent

- biodegradation, biological filtration, sand 387
- biological treatment, filters, peat, pathogens, removal 3308
- treatment, biological filtration, wood chips, USA 383
- water reuse, irrigation, Israel 2389

Septic tanks

- alkylbenzene sulfonates, biodegradation, Canada, Ontario 1433
- nitrilotriacetic acid, biodegradation, Canada, Ontario 1433
- sludges, biological treatment, aerobic conditions, nitrogen, biodegradation, nitrous oxide, emission, Japan 762

Serpula lacrimans

- control, wood, biodeterioration, *Trichoderma* 213
- dispersal, India, Himachal Pradesh 1120
- distribution, India, Himachal Pradesh 1120

Serratia marcescens

- growth, contact lenses, disinfectants, solutions, chlorhexidine gluconate 3023
- lignin, biodegradation 1467
- lignolytic microorganisms 3535

Sewage

- activated sludge
 - bacteriophages, removal 389
 - bioreactors, aeration, biomass, adhesion, plastics 1295
 - bulking, foaming, microorganisms, characteristics, Italy 1325
 - coliform bacteria, removal 389
 - faecal coliforms, removal, France 331
 - adenoviridae, detection, polymerase chain reaction 3188
 - aerobic treatment
 - activated sludge, bulking, heterotrophic microorganisms, nitrifying bacteria, competition 1287
 - bioreactors, membranes 344
 - anaerobic digestion
 - methane production 2354
 - struvite, production 1379
 - anaerobic treatment
 - bioreactors
 - Colombia 2285
 - Egypt 2285
 - microbial flora, characterization 2348
 - temperature 1226
 - anaerobic treatment + crossflow, microfiltration 1218
 - bacteria, isolation, flow cytometry 3176
 - bacteriophages
 - detection
 - Escherichia coli*
 - Finland 767
 - Nicaragua 767
 - biodegradation, feeds, ponds, *Lemna gibba*, production 461
 - biofilms
 - anaerobic treatment
 - bioreactors, mathematical models 3274
 - mathematical models 3273

Sewage *cont.*

- biofilms *cont.*
 - heterotrophic microorganisms, reviews 1822
- biological filtration
 - aeration
 - assessment 1259
 - reviews 1267
 - aerobic conditions, hydrodynamics, biofilms, growth, mathematical models 1273
 - artificial wetlands, UK 1374
 - membranes, anaerobic conditions 1283
 - rotating biological contactors, comparisons 1207
 - sand, France 2312
 - submerged, biofilms, diffusion 1277
 - upgrading, Germany 1274
- biological filtration + microfiltration, pathogens, removal, efficiency 3268
- biological fixed-film systems, anaerobic treatment, aerobic treatment, Germany 1192
- biological treatment
 - activated sludge
 - Aeromonas veronii*, removal, Italy 293
 - chemical oxygen demand, quantification, mathematical models 2258
 - control 1328
 - flow, dynamics 1292
 - mathematical models 3310
 - optimization 1284
 - microbial activities, techniques, monitoring 3180
 - updating, Austria, design, performance 1293
 - activated sludge + crossflow microfiltration 1286
 - activated sludge + media, polyurethane 1291
- anaerobes
 - sulfates 3814
 - sulfides 3814
 - toxicity 3814
- application to land, China 3369
- biological filtration 1262
 - France 1261
 - upward flow, reviews 1260
- bioreactors 1237
 - biofilms, Norway 1173
 - hydraulic residence, equations, determination 418
- books 3912
- comparisons, Canada 1211
- effluents, irrigation, Kuwait, performance 2363
- equipment, aeration, stirring, upgrading 1778
- filters, soil, design, Germany 1334
- fish ponds, Côte d'Ivoire 1398
- fluidized beds 446, 1183
 - aerobic conditions, biofilms, accumulation 3261
- anaerobic conditions
 - biofilms, kinetics, mathematical models 1225
 - microbial flora, methane production, population dynamics 1187
- biofilms 1210
 - activity 1185
 - mathematical models
 - performance 1186
 - Turkey 2282
 - Zoogloea ramigera*, biofilms, mathematical models, substrates, utilization 1805
- Japan 1202
- lagoons, hydraulic residence, equations, determination 418
- lagoons + rotating biological contactors, Germany 1370
- marshes, USA 420
- microorganisms, immobilization, cellulose triacetate 1190
- nitrification, inhibition, toxic substances, Denmark 1629

Sewage cont.biological treatment *cont.*

- nutrients, removal, techniques, control 2619
- oxidation ditches 2337
 - Egypt 2338
- ponds
 - algae, performance, Morocco, climate, effects 416
 - anaerobic conditions 1230
 - Daphnia*, mathematical models 3333
 - Eichhornia crassipes* 2271
 - mathematical models, kinetics 422
 - Salvinia molesta* 2271
- rotating biological contactors 443
 - biofilms, dissolved oxygen concentration, determination, microelectrodes 1394
- upgrading, bioreactors, submerged, Germany 1626
- wetlands
 - Australia, water depths, effects 1344
 - constructed
 - aquatic plants, selection 1339
 - Australia 1336
 - design 1366
 - higher plants 1338
 - USA 1365
 - reed beds, Japan 1335
- carbon, removal, bioreactors 2626
- carbonaceous biochemical oxygen demand, evaluation 2249
- composting, application to land, reviews 351
- denitrification
 - activated sludge, dynamic models, temperature 685
 - biological filtration, upgrading, Germany 1639
 - biological treatment
 - Belgium 1649
 - respiration rate, determination 1613
 - reviews 1643
 - reed beds, Germany 1623
- disinfection
 - sunlight 227
 - ultra violet radiation, bioassays 305
 - ultraviolet radiation 1142
- domestic gardens, plant residues, compost, production, correctional institutions, USA 360
- effluents, nitrogen, removal, biological treatment, design 1652
- Escherichia coli*, antibiotics, resistance, France 331
- faecal coliforms, enzymes, beta-galactosidase, techniques, determination, colorimetry 3194
- fish ponds, energy, transformation 3365
- fresh water, contamination, faecal flora, monitoring, Finland 3142
- groundwater, contamination, faecal flora, France 1167
- hepatitis A virus, detection, polymerase chain reaction 3903
- hepatitis A virus, detection, immunology 2826
- holiday accommodation, biological treatment, activated sludge, Turkey 769
- hotels, biological treatment, activated sludge, Turkey 769
- industrial wastes, nitrogen, removal, activated sludge, upgrading, Slovenia 1640
- influent, effects, activated sludge, clarifiers 398
- lagoons
 - biological treatment
 - coliphages 1145
 - indicator species 1145
 - faecal coliforms, removal, France 331
 - low strength, biological treatment, wetlands, constructed, Canada 1337
 - microbial contamination, rotavirus, Brazil 3364
 - nitrate, removal, *Acinetobacter*, reviews 3707

Sewage cont.

nitrification

- activated sludge
 - dynamic models, temperature 685
 - foaming, UK 3328
- biological filtration 1266
- biological treatment, reviews 1643
- denitrification
 - biological filtration, kinetics 1634
 - rotating biological contactors 1393
 - anaerobic treatment, aerobic treatment, Japan 2358
- nitrogen
 - carbon, removal, biological treatment, fluidized beds, aerobic treatment, anaerobic treatment 1184
- removal
 - biological treatment, upgrading, computer simulation, Netherlands 1776
 - bioreactors 2626
 - Denmark, kinetics 1641
 - Israel 3709
 - wetlands 1368
 - uptake, *Botryococcus braunii*, growth 1839
- nutrient removal, biological treatment, wetlands 1353
- nutrients
 - removal
 - activated sludge, control, expert systems, Germany 671
 - biological filtration, aeration 1276
 - biological treatment
 - Netherlands 3702
 - upgrading, Germany 1608
 - bioreactors
 - aerobic treatment, anaerobic treatment, USA 2627
 - biomass, development 1306
 - Eichhornia crassipes*, Jamaica 3887
 - organic compounds, biological treatment, mathematical models 2436
 - organic matter, biodegradation, activated sludge, hydrolysis 3311
- pathogens
 - removal
 - biological filtration, UK 380
 - disinfection
 - chlorine 298
 - chlorine dioxide 298
 - lime, addition 2237
 - phosphates, removal, *Acinetobacter*, reviews 3707
 - phosphorus
 - removal
 - activated sludge 687
 - Escherichia coli*, genetic engineering 3753
 - Israel 3709
 - uptake, *Botryococcus braunii*, growth 1839
- ponds
 - algae
 - production
 - amino acids, France 2370
 - fatty acids, France 2369
 - anaerobic treatment, methane production, Portugal 1375
 - Salmonella*, antibiotics, resistance, Morocco 3162
 - protozoa, identification 1148
 - quality, waste water treatment, plant, performance, models 3256
 - refuse, composting + aerobic digestion, biogas, production, fuel cells 438
 - runoff, sewerage, microbial flora, urban areas, UK 3174
- seawater
 - Enterococcus*, inactivation, solar radiation 3167
 - faecal coliforms, inactivation, solar radiation 3167
 - sulfides, production, *Desulfovibrio desulfuricans*, inhibition, kinetics 666
 - surface water, pollution, water quality, criteria, Russia 3141

Sewage cont.

- surfactants, alkanes, removal, biological treatment, efficiency 3636
- toxicity, monitoring, *Photobacterium phoreum* 1237
- treatment
 - activated sludge
 - aeration, basins, design, Germany 404
 - bioreactors, membranes + filtration, evaluation 2332
 - dynamics, mathematical models 1289
 - operation, low temperatures, mathematical models 399
 - aerosols, microorganisms, production, monitoring 303
 - biofilms, aerobic conditions, *Nitrosomonas*, new species 3862
 - bioreactors
 - anaerobes, redox potential, techniques, determination 302
 - membranes 346
 - cyanides, biodegradation, activated sludge 668
 - design 761
 - hydroponics, nitrogen, cycling, *Phragmites australis*, rhizomes, biofilms 1333
 - lagoons, performance, cold zones, ice, Canada 2341
 - linear alkylbenzene sulfonate
 - biodegradation
 - application to land, ecosystems, toxicology, Spain 3639
 - composting, ecosystems, toxicology, Spain 3639
 - nitrification, biological filtration, UK 380
 - onsite, aerobic conditions, USA 3266
 - Slovakia, reviews 1772
 - stabilization basins, pathogens, survival, brackish water, pH 294
 - surfactants, biodegradation, activated sludge, Switzerland 635
 - upgrading
 - biological filtration, UK 449
 - Hungary 342
 - Vibrio cholerae*, isolation, Argentina 2182
 - Vibrio metschnikovii*, isolation, Argentina 2182
 - viruses, detection, polymerase chain reaction 2857
 - volatile compounds, removal, anaerobic treatment 2695
 - waste treatment, anaerobic digestion, books 2798
 - waste water treatment
 - artificial wetlands, USA 1369
 - nitrification, bioreactors+biofilms, Norway 2276
 - wetlands, pollution, Papua New Guinea 1343
- Sewage disposal**, dumping, marine environment, contamination, *Clostridium perfringens*, indicator species, USA 3360
- Sewage effluent**
 - application to land 451
 - aquifers, recharge, Israel 3389
 - bacteria
 - control
 - chlorine 3170
 - ozone 3170
 - biological filtration, Saudi Arabia 1270
 - biological treatment, wetlands, lagoons, Australia 1350
 - carbonaceous biochemical oxygen demand, evaluation 2249
 - DDT, removal, artificial wetlands, *Phragmites australis* 3335
 - disinfection
 - chlorine + peracetic acid
 - bacteria, control 3076
 - viruses, control 3076
 - ultraviolet radiation
 - bacteria, control, USA 2693
 - UK 225
 - viruses, control, USA 2694

Sewage effluent cont.

- Escherichia coli*, antibiotics, resistance, France 331
- nutrients
- removal
 - biological treatment, wetlands, Australia 1364
 - Eichhornia crassipes*, iron, effects, Spain 1612
 - wetlands, Australia 1351
- recycling, fish farms, fish, microbial contamination, indicator species 3367
- sea water
 - Enterococcus*, inactivation, solar radiation 3168
 - faecal coliforms, inactivation, solar radiation 3168
 - sulfite reducing bacteria, *Clostridium*, enumeration, comparison 2896
 - suspended solids, removal, biological filtration, tropics 3306
- viruses
 - control
 - chlorine 3170
 - ozone 3170
 - health hazards, control 2843
 - removal, soil 237

Sewage effluent disposal

- aquatic environment, Europe 3361
- beaches, swimming, waterborne diseases, surveys, Australia 2832
- coastal areas, marine environment, microbial contamination, mathematical models 1135
- sea water
 - coastal areas
 - Pseudomonas aeruginosa* plasmids
 - antibiotics, resistance, Spain 3155
 - arsenic, resistance, Spain 3155
 - heavy metals, resistance, Spain 3155
 - contamination, swimming, health hazards, South Africa 2833
 - Escherichia coli*, survival 1139
 - Salmonella*, survival 1139
 - shellfish
 - coastal areas
 - Pseudomonas aeruginosa* plasmids
 - antibiotics, resistance, Spain 3155
 - arsenic, resistance, Spain 3155
 - heavy metals, resistance, Spain 3155
 - viruses, sea water, coastal areas, indicator species 3138

Sewage + poultry, abattoirs, effluents, biological treatment, *Campylobacter*, contamination, Netherlands, surveys 292**Sewage sludge**

- aerobic digestion, thermophilic microorganisms, UK 427
- aerobic treatment
 - Norway 2280
 - thermophilic microorganisms 3262-3263
- anaerobic digestion 425
 - aeration, thickening 440
 - aerobic digestion 1376
 - anaerobes, conditions, effects 2351
 - efficiency 2343
 - heat treatment 3346
 - struvite, production 1379
 - viruses, *Giardia*, cysts 1780
- anaerobic treatment
 - aerobic treatment, bioreactors, redox potential, monitoring 1378
 - bacteria, pellets, formation 430
- application soil, desert soil, viruses, survival 3161
- application to land, Canada 1399
- Ascaris suum*, removal, anaerobic digestion 289
- Bacillus thermoglucosidasius*, isolation, esterases, production 792
- bacteria, biodegradation, carboxylic acids, production, aerobic treatment 341

Sewage sludge cont.

- biogas, production 488
- biological treatment, nematoda, eggs, viability 3166
- Campylobacter*, detection 1858
- coal fly ash, composting, microbial activities, Hong Kong 2302
- composting
 - efficiency, USA 2303
 - land reclamation, UK 368
 - odour abatement, USA 377
 - reviews, USA 1244
 - USA 374-375, 1247, 2292, 2304
- composts, marketing, USA 1236
- dewatering, effluent, denitrification, activated sludge, Germany 2628
- digestion, aerobic conditions, kinetics 765
- disposal, oceans, *Clostridium perfringens* 3363
- disposal to land
 - Europe 364
 - management
 - UK 452
 - USA 452
 - North America 364
- drying, gases, nitrogen, removal, activated sludge, polyethylene glycol, pellets 1630
- enterovirus, detection, polymerase chain reaction 1144
- faecal flora, inactivation, alkali treatment 1140
- fuels, production 488
- granules
 - anaerobic treatment
 - ammonium, removal, waste water 3705
 - phosphates, removal, waste water 3705
- heavy metals
 - bacterial leaching, *Thiobacillus* 643
 - removal
 - bacteria 2597
 - bacterial leaching, *Thiobacillus* 640
- hepatitis A virus, detection, polymerase chain reaction 1144
- hydrolysis, anaerobic digestion, nutrients, removal, Denmark 1606-1607
- liquors, nitrification, biological treatment, ammonia, effects 1637
- methane production
 - anaerobic digestion
 - bioreactors 2352
 - supports, sepiolite, effects 435
 - utilization, books 2801
- nitrification, techniques, determination 1781
- pathogens, removal, freezing, thawing 291
- phosphorus, removal, biological treatment, Sweden 3706
- plant residues, composts, production, marketing, USA 1253
- polycyclic hydrocarbons, biodegradation, microorganisms, detection, screening 813
- primary, fermentation, biological treatment, bioreactors, design 3258
- production, reduction, biological treatment, activated sludge, aerobic digestion, bioreactors 3317
- refuse
 - composting
 - anaerobic treatment, aerobic treatment, Austria 764
 - Italy 363
 - Salmonella*, techniques, determination 2238
- sedimentation, tanks, biological treatment, upgrading, design, performance 1193
- soil, covers, refuse, biodegradation, landfills, enhancement 2696
- storage, pathogens, survival 1143
- sulfur, oxidation, *Thiobacillus*, sulfuric acid, production 661
- surfactants, alkanes, removal, biological treatment, efficiency 3636

Sewage sludge cont.

- thiosulfates, oxidation, *Thiobacillus*, sulfuric acid, production 661
- toxic substances, biodegradation, anaerobic digestion 524
- Toxocara canis*, removal, anaerobic digestion 289
- treatment
 - anaerobic digestors, design 428
 - Cryptosporidium parvum*, oocysts, survival 2239
 - waste water treatment, pathogens, removal, USA 334
 - wood chips, composting, organic matter, biodegradation, moisture 354

Sewage sludge disposal

- application to land, Germany, reviews 2691
- composting, Germany, reviews 2691

Sewage sludge + refuse, composting, USA 373**Sewage treatment plants**

- Chelatobacter heintzii*, distribution 3836
- Chelatococcus asaccharovorans*, distribution 3836

Sewerage

- biofilms, growth, oxygen, sulfates, reduction 3356
- coliform bacteria, streptococcaceae, monitoring 3175
- concrete
 - corrosion, biological filtration, Netherlands 3017
 - microbial corrosion
 - Japan 3012
 - Thiobacillus*, control, biological competition 1024
- hydrogen sulfide, production, control, nitrates 3057
- odour abatement, biological filtration, Netherlands 3017
- organic matter, biodegradation 1445
- pipes, concrete, microbial corrosion, fungi, isolation 3018
- sewage, runoff, microbial flora, urban areas, UK 3174
- sulfides, formation, biofilms 1191
- surfactants, biodegradation, UK 3649
- waste water, hydrogen sulfide, emission, control, aeration, Kuwait 3260

Shellfish

- coastal areas
 - sewage effluent disposal
 - Pseudomonas aeruginosa* plasmids
 - antibiotics, resistance, Spain 3155
 - arsenic, resistance, Spain 3155
 - heavy metals, resistance, Spain 3155
- contamination
 - polioviruses, Morocco, detection, comparisons 2786
 - viruses, reviews 2969
- food poisoning
 - bacterial toxins, detection 893
 - phytotoxins 1878
 - toxins, detection, enzyme immunoassay 2027
- hepatitis A virus
 - detection 2958
 - polymerase chain reaction 2967
 - reversed transcription 2967
- microbial contamination, indicators, books 830
- poisoning, algal blooms, toxins, New Zealand 2220
- production, marine areas, water quality, USA 1130

Shewanella putrefaciens

- iron, reduction 3659
- manganese, reduction 3659

Shigella, foods, isolation, culture techniques, DNA probes 1930**Shigella dysenteriae**

- control
 - antibiotics
 - fish, contamination, India 2962
 - seafoods, contamination, India 2962

Shrimps

- Clostridium botulinum*
 - spoilage, vacuum packaging, temperature, USA, Georgia 950
 - toxins, production, vacuum packaging, temperature, USA, Georgia 950
- growth, organic wastes, utilization 2362
- microbial contamination
 - China, Ecuador, Mexico, retail marketing, wholesale marketing, comparisons 938
- reviews
 - Ecuador 939
 - India 939
 - Malaysia 939
 - Philippines 939
 - USA 939
- preservation, glucose oxidase, catalase 116
- spoilage, *Pseudomonas fluorescens*, control, glucose oxidase, catalase 116

Sierra Leone, smoked fish, contamination, aflatoxins 124**Silage**

- biodegradation, methane production, anaerobic digestion, mathematical models 3399
- Listeria monocytogenes*, survival, oxygen, monitoring 3810
- microbial activities, *Listeria*, mathematical models 1972
- spoilage, yeasts, control, lactic acid bacteria, inoculation 3811

Silage additives

- lactic acid bacteria, screening 757
- molasses
 - silage making
 - crab waste 758
 - wheat straw 758

Silage making

- Bromus inermis*, microwave radiation 2690
- crab waste, molasses, silage additives 758
- pig manure + wheat straw
 - fermentation
 - molasses
 - inoculation-
Lactobacillus plantarum 760
 - Streptococcus faecalis* 760
- stability
 - maize, lactic acid bacteria + *Propionibacterium shermanii* 2689
 - pearl millet, lactic acid bacteria + *Propionibacterium shermanii* 2689
 - wheat straw, molasses, silage additives 758

Silene vulgaris

- cadmium, polluted soils, bioremediation 1164

Silica, *Listeria monocytogenes*, adhesion, proteins, sorption, effects 3107**Silicone rubber**, biodeterioration, *Candida tropicalis*, biofilms 3009**Silkworms**

- pupae
 - wastes
 - anaerobic digestion
 - biogas, production 487
 - methane production 487

Silver

- catheters, bacteria, adhesion, control 2126
- sorption, *Aspergillus niger* 2615
- ultraviolet radiation, effects, iron, ore, bacterial leaching, *Thiobacillus ferrooxidans* 2591

Simazine, biodegradation, surface water, bacteria 621**Singapore**

- cooling towers, *Legionella pneumophila* 840
- humidifiers, *Legionella pneumophila* 840
- oil refinery wastes, biological treatment, lagoons 561
- water, *Legionella pneumophila* 840

Single cell protein

- production
 - distillery effluent, biodegradation, *Aspergillus awamori* var. *kawachi* 463
 - lignocellulose, biodegradation, fungi 2480
 - maize cobs, pretreatment, sodium hydroxide, cellulose, biodegradation, bacteria 3511
 - poultry products, processing, wastes, fermentation 1400
 - sea water+piggery effluent, ponds, *Spirulina maxima* 3375
 - sugarcane bagasse, biodegradation 699
 - wheat straw, utilization, yeasts 458

Skim milk, heat treatment, *Listeria innocua*, inactivation, kinetics 162**Skin**, cleaning, microorganisms, food hygiene 839**Slaughterhouse waste**

- biodegradation, bioreactors, biological filtration, anaerobic treatment 2699
- biogas, production, anaerobic treatment, Germany 491
- biological filtration, anaerobic conditions, stability 2697
- biological treatment
 - activated sludge, nitrification, chemical oxygen demand, removal 3816
 - anaerobic digesters, supports, bentonite, kinetics 1380
 - bioreactors, performance, kinetics 2698
- composting, design, Australia 1246
- discharge, rivers, microbial contamination, Nigeria 3143
- nitrogen, removal, biological treatment, activated sludge, mathematical models 1782
- organic compounds, removal, biological treatment, activated sludge, mathematical models 1782

Slovakia

- cotton, contamination, aflatoxins, *Aspergillus flavus* 1011
- organic compounds, biodegradation, sediment, microbial flora 285
- sewage, treatment, reviews 1772

Slovenia, nitrogen, removal, sewage, industrial wastes, activated sludge, upgrading 1640**Slow release fertilizers**, diesel oil, biodegradation, polluted soils, USA 318**Sludge disposal**

- Europe, books 835
- North America, books 835

Sludges

- acetamide, biodegradation, anaerobes 1436
- anaerobic digesters, bacteria, methane, identification 2353
- anaerobic digestion
 - anaerobes, conditions, effects 2351
 - granules, activity 426
 - reviews 1170
 - struvite, production 1379
- anaerobic treatment
 - aerobic treatment, bioreactors, redox potential, monitoring 1378
 - polymers, characterization 2290
 - propionates, oxidation, bacteria, interactions 2737
- application to land, *Salmonella*, bacterial count, enumeration, comparisons 1907
- biodegradation, aerobic treatment + anaerobic digestion, pH, control 2275
- biological treatment
 - anaerobic treatment, thermophilic microorganisms, Denmark 1774
 - phosphorus, fixation 2634
 - substrates, utilization, denitrification, biofilms 3732
- composition, characteristics, industrial wastes, biological treatment, anaerobic treatment, bioreactors 3269
- composting, reviews 1170

Sludges cont.

- disposal to land
 - management
 - UK 452
 - USA 452
- granular
 - bioreactors, anaerobic conditions, microbiology characteristics 2730
 - formation, bioreactors, denitrification, drinking water 1742
- granulation
 - alkaline pulping, waste water, biological treatment, bioreactors 2660
 - biological fixed-film systems, activated sludge, bioreactors, comparisons 3250
- granules
 - acrylic acids, biodegradation, anaerobes, initiation 3477
 - characteristics, *Methanohrix*, phenols, waste water, biodegradation, bioreactors 2551
 - structure, anaerobic treatment 3270
 - heavy metals, removal, bacterial leaching, bacteria, sulfur, oxidation 2600
- hydrolysis
 - anaerobic digestion, nutrients, removal, Denmark 1606-1607
 - utilization, substrates, denitrification, biofilms 1619
- industrial wastes, anaerobic treatment, pentachlorophenol, sorption 3588
- methanogenic, granules, characteristics, bioreactors, anaerobic conditions 2287
- microorganisms, consortia, identification, anaerobic digesters, inoculation 3345
- primary + anaerobic digestion, activated sludge, evaluation 3351
- storage, pathogens, survival 1143
- utilization, books 2792
- waste water, nitrogen, removal, nitrification + denitrification 3731

Slurries, bioreactors, petroleum hydrocarbons, soil, biodegradation 3232**Smoked fish**

- contamination, aflatoxins, Sierra Leone 124
- Listeria* 118
- microbial contamination, *Listeria monocytogenes* 2956
- salmon, vacuum packaging, storage life, microbial contamination 2019
- storage, *Listeria monocytogenes*, control, sodium chloride, packaging 2960
- storage quality, packaging, controlled atmospheres 949

Smoked salmon

- storage
 - Listeria monocytogenes*
 - control
 - sodium lactate 1041
 - sodium nitrite, sodium chloride 1042

Soaps, hands, microbial contamination, control 1058**Sodium**

- volatile fatty acids, biodegradation, inhibition, anaerobic digestion 2347
- waste water treatment, anaerobic digestion, methane production, inhibition 2347

Sodium acetate, *Bifidobacterium*, fish, spoilage, control 2015**Sodium acrylate**, biodegradation, *Arthrobacter* 2560**Sodium anthraquinone sulfonate**, biodegradation, bacteria, activated sludge 512**Sodium chloride**

- cheeses, microbial flora, survival 2087
- groundnuts, *Aspergillus flavus*, aflatoxins, production, control 2939
- Listeria monocytogenes*, virulence 1083
- mackerels, spoilage, *Enterobacter aerogenes*, control 2953
- pigmeat, quality, bacterial count, control 2048
- Salmonella enteritidis*, growth, pH 2200

Sodium chloride *cont.*

- sodium nitrite, smoked salmon, storage, *Listeria monocytogenes*, control 1042

Sodium cyanide, biodegradation, *Pseudomonas putida*, kinetics 2441**Sodium gluconate**
beef

- Clostridium sporogenes*, control 966
- Listeria monocytogenes*, control 966

Sodium hydroxide, treatment, cotton, straw, biodegradation 1461**Sodium lactate**
beef

- Clostridium sporogenes*, control 966
- Listeria monocytogenes*, control 966

Clostridium botulinum

spores

- germination, inhibition 1091
- heat resistance 1091
- toxins, production, inhibition 1091
- pigmeat, quality, bacterial count, control 2048
- smoked salmon, storage, *Listeria monocytogenes*, control 1041

Sodium nitrate

refrigeration

- beef, *Listeria monocytogenes* 2091
- sausages, *Listeria monocytogenes* 2091

Sodium nitrite

- bacon, *Clostridium botulinum*, control 2978

- cured meats, *Clostridium botulinum*, control 2978

- sausages, *Yersinia enterocolitica*, survival 986

- sodium chloride, smoked salmon, storage, *Listeria monocytogenes*, control 1042

Sodium phosphate

poultry

- carcasses, *Salmonella typhimurium*, control 989
- skin, *Salmonella typhimurium*, control 989

Soft cheese, *Listeria monocytogenes*, Costa Rica 2097**Soft drinks**, *Clostridium*, detection, polymerase chain reaction 819**Soil**

- aflatoxins, leaching 68

- atrazine, biodegradation, bacteria 630

bacteria

- diversity, genetically engineered microorganisms 800
- nitrophenols, biodegradation, determination 1150

- Porphyridium*, polysaccharides, biodegradation 2569

- bacteriophages, survival, temperature 3147

bioremediation

- aromatic hydrocarbons, biodegradation, microorganisms 3494
- organochlorine compounds, biodegradation, microorganisms 3494

- biphenyls, biodegradation, microorganisms, surfactants, effects 3572

caesium

sorption

- Rhodococcus*, bioaccumulation 3662

- Rhodococcus erythropolis*, bioaccumulation 3662

- cellulolytic microorganisms, detection, culture media 3892

- chloroanilines, biodegradation,

- Pseudomonas acidovorans* 499

- chlorophenol, biodegradation, straw, composting, effects 3533

Clostridium botulinum

detection

- bioassays 1853
- polymerase chain reaction 1853

2,4-D

- biodegradation, *Pseudomonas cepacia* 1557

- residues, biodegradation, *Azotobacter chroococcum* 631

Soil *cont.*

- EPTC, biodegradation, *Rhodococcus* 3628

- ferulic acid, biodegradation, *Nocardia autotrophica* 2748

- heavy metals, removal, macrophytes, bioremediation 3668

- hexachlorohexane, biodegradation, *Pseudomonas*, enumeration, agar 3902

isolation

- Bacillus*, cellulase, production 1784

- Streptomyces*, cellulase, production 1784

microbial flora

- toluene, biodegradation, concentration, effects 3559

- trichloroethylene, biodegradation, concentration, effects 3559

- microorganisms, sucralose, biodegradation, catabolism 1438

- naphthalene, sorption, *Pseudomonas fluorescens*, models 3461

organic compounds

- biodegradation 1163

- microorganisms 324

- carbon dioxide, measurement 3495

- Phanerochaete chrysosporium* 3245

- radiation, effects 1454

- organolead compounds, biodegradation 3473

parathion-methyl

biodegradation

- algae 1553

- cyanobacteria 1553

- pentachlorophenol, biodegradation, physicochemical properties 3591

- pesticides, biodegradation, radiation, effects 1454

- phenanthrene, biodegradation, microorganisms, surfactants, effects 3572

- phosphates, solubilization, microorganisms 3747

- physicochemical properties, organic chemicals, biodegradation, microorganisms, mathematical models 3493

- plants, heavy metals, biosorption 3672

pollution

- biphenyl, biodegradation, bacteria, characterization 3484

- polychlorinated biphenyls, biodegradation, bacteria, characterization 3484

polychlorinated biphenyls

- biodegradation, enhancement, bacteria, inoculation 3498

- bioremediation, thermal desorption, effects 3599

polycyclic hydrocarbons

biodegradation

- microorganisms

bioremediation

- sorption, extraction 3490
- transport processes, extraction 3490

- polymers, polyesters, biodegradation, microorganisms 3606

- salinity, petroleum, oils, biodegradation 3233

- Salmonella*, detection 2776

slurries

- aromatic compounds

biodegradation

- Pseudomonas acidovorans*

- 3460

- Pseudomonas aeruginosa*

- 3460

- Pseudomonas cepacia* 3460

- Pseudomonas ruhlandii* 3460

- sorption, organic chemicals, biodegradation, microorganisms, mathematical models 3493

termites

infestation

- cellulose, biodegradation, *Bacillus* 3527

- hemicellulose, biodegradation, *Bacillus* 3527

Soil *cont.*

- trace metals, mobilization, bacteria, polymers 3677

- trifluoroacetate, biodegradation, aerobes 3448

- viruses, removal, sewage effluent 237

Soil bacteria

- aldicarb, biodegradation, Turkey 2571

- oil spills, bioremediation 569

- polluted soils, petroleum hydrocarbons, biodegradation 569

Soil flora

- organic compounds, biodegradation, soil, USA 566

- petroleum hydrocarbons

biodegradation

- rhizosphere 2518

- soil, models 3238

- polluted soils, hydrocarbons, toxicity, bioremediation, effects 3237

- pyridines, biodegradation 2261

Soil inoculation*Alcaligenes xylooxidans*

- activity, biological competition 3865

- growth, biological competition 3865

Soil microorganisms, 2,4-D, biodegradation, genetics 3621**Soil pollution**

- aliphatic hydrocarbons, bioremediation, reviews 3207

- bioremediation, spent mushroom compost 2266

- fuel oils, storage, caves, heterotrophic

- microorganisms, aerobes,

- bioremediation, Germany 1688

- heavy metals, bioremediation, plants,

- uptake 2589

- petroleum hydrocarbons, bioremediation, reviews 3207

Solar radiation

effects

- faecal coliforms, dynamics, ponds, Morocco 3169

- Vibrio cholerae*, dynamics, ponds,

- Morocco 3169

effluents

seawater

- Enterococcus*, inactivation 3167

- faecal coliforms, inactivation 3167

sewage

seawater

- Enterococcus*, inactivation 3167

- faecal coliforms, inactivation 3167

sewage effluent

sea water

- Enterococcus*, inactivation 3168

- faecal coliforms, inactivation 3168

Solid wastes, composting, USA 1241**Solutes**, transport, biofilms, groundwater,

- mathematical models 279

Solvents

- chlorine, biodegradation, bioreactors,

- biofilms, microbial flora 2616

- diphenylmethane, cholesterol, oxidation, *Pseudomonas* 3601

production

Clostridium acetobutylicum

- induced mutants 3848

- pH 777

- potato waste, utilization, *Clostridium*

- acetobutylicum* 541

- xylene, cholesterol, oxidation,

- Pseudomonas* 3601

Sorbic acid

- Saccharomyces cerevisiae*, control, culture media, water content 3051

- yeasts, control, almond paste 2940

Sorbic acids

resistance

- beverages, spoilage, yeasts 1121

- foods, spoilage, yeasts 1121

Sorghum

- biodegradation, methane production, anaerobic digesters, carbon dioxide,

- removal 486

residues

carbohydrates

utilization

- ethanol production

- Fusarium oxysporum* 3612

Sorghum cont.
residues cont.
carbohydrates cont.
utilization cont.
ethanol production cont.
Saccharomyces cerevisiae
3612

Sorption

copper, *Pseudomonas aeruginosa* 3654
ion exchange, cations, chemical properties, *Thiopsis arrhizus* 3669
polycyclic hydrocarbons, biodegradation, microorganisms, bioremediation, soil, extraction 3490

Sous-vide treatment, *Listeria monocytogenes*, control, chicken meat, contamination 3060

South Africa

drinking water, enteric viruses, risk assessment, techniques 2892
meat
contamination
Escherichia coli 863
Staphylococcus aureus 863
meat products
contamination
Escherichia coli 863
Staphylococcus aureus 863
Merluccius, microbial contamination, spoilage 2021
phosphorus, removal, activated sludge, monitoring, control 2635
poultry
carcasses, *Listeria* 1003
contamination
Escherichia coli 863
Staphylococcus aureus 863
processing, equipment, contamination, *Listeria* 1003
sea water, contamination, sewage effluent disposal, swimming, health hazards 2833
water systems, microbial corrosion, research 1030

South America

feeds, contamination, mycotoxins 62
foods, contamination, mycotoxins 62
swimming pools, microbial contamination, assessment 3030

Soyabean flour, storage, microbial contamination, packaging materials, comparisons 2935

Soyabean husks, pigmeat, microbial contamination, *Listeria monocytogenes*, control, heat treatment 3046

Soyabeans

curd, waste water, biological treatment, *Rhodospirillum rubrum* 459
storage decay, fungi, control 82
wastes, biomass production, edible fungi 2373

Soyamilk, *Lactobacillus*, growth 3855

Soybean products, curd, waste water, utilization, *Rhodospirillum rubrum*, proteins, production 459

Spa pools, hygiene, books 2802

Spacecraft

equipment, microbial contamination 206
microorganisms
control, radiation, resistance 234
heat resistance 234

Spain

Valencia, *Aeromonas*, distribution, polluted water, marine areas 265
air, microbial contamination, buildings, detection 1872
algal blooms, coastal areas 2219
anchovies, bacteria, histamine, production, enzyme activity 119
ancient monuments
biodeterioration
bacteria 2116
fungi 2116
cereals, *Fusarium*, fumonisins, production 1973
cheeses
bacteria, determination 2088
moulds, determination 2088
yeasts, determination 2088
cider, microbial contamination, *Lactobacillus*, pH 1990

Spain cont.

food, microbial contamination 2000
linear alkylbenzene sulfonate
biodegradation
sewage
treatment
application to land, ecosystems, toxicology 3639
composting, ecosystems, toxicology 3639
maize, processes foods, *Fusarium*, fumonisins 2950
meat, organs, *Salmonella* 2034
mineral waters, bacterial count 862
mortar
archaeological material
biodeterioration
lichens 196
mosses 196
microbial corrosion, techniques, analysis, comparisons 1909
olive oil, production, waste water, biological treatment, *Azotobacter chroococcum*, growth 2639
paintings, microbial corrosion, techniques, analysis, comparisons 1909
poultry, carcasses, *Salmonella* 89
pulp and paper industry, wastes, vermicomposting 3296
refuse, wastes, composting 2310
sandstone, ancient monuments, biodeterioration, lichens 2124
sewage effluent disposal
sea water
coastal areas
Pseudomonas aeruginosa
plasmids
antibiotics, resistance 3155
arsenic, resistance 3155
heavy metals, resistance 3155

shellfish

coastal areas
Pseudomonas aeruginosa
plasmids
antibiotics, resistance 3155
arsenic, resistance 3155
heavy metals, resistance 3155

stonework

churches, biodeterioration, lichens 2123
sandstone, microbial corrosion 2118
surfactants, biodegradation, waste water treatment, lagoons 637
waste water, saline water, biological treatment, bioreactors, activated sludge 1665
winemaking, yeasts, phenotypes 268

Spent mushroom compost, soil pollution, bioremediation 2266

Sphalerite

oxidation
Thiobacillus ferrooxidans, comparisons 3688
Thiobacillus thiooxidans, comparisons 3688

Sphingobacterium thalpophilum, isolation, animal manures, composts, oleic acid, biodegradation 2438

Sphingomonas

aromatic hydrocarbons
biodegradation
characterization 3183
identification 3183
biochemical pathways, furans, biodegradation 3455
dibenzo-p-dioxin, biodegradation, identification, ribosomal RNA 3425

Spices

Enterobacter aerogenes, carboxy-lyases, inhibition 2168
herbs, microbial contamination, reviews 1985
microbial contamination
control
irradiation, enzyme activity, evaluation 2942

Spices cont.

microbial contamination cont.
control cont.
steam sterilization, enzyme activity, evaluation 2942
microbial flora, Austria 1987
Spinach, microbial contamination, storage 104
Spirochaeta thermophila
cellulose, biodegradation 794
xylan, biodegradation 794
Spirulina maxima
immobilization, pig manure, biological treatment 752
sea water+piggery effluent, ponds, single cell protein, production 3375
Spirulina platensis, production, starch, waste water, utilization, Thailand 1404
Spoil banks, drainage channels, heavy metals, uptake 1581
Spoilage
alcoholic beverages
yeasts
control
coumaric acids 2151
potassium sorbate 2151
beef, cold storage, prediction, assays 2975
beers
lactic acid bacteria, mathematical models 1991
Pectinatus frisingensis, volatile fatty acids, production, mathematical models 1995
bread
Bacillus, differentiation 1981
moulds, control 1980
control, fish, *Bifidobacterium*, sodium acetate 2015
foods
Penicillium, enumeration, agar, evaluation 3130
yeasts, detection, electrical activity 1928
Macruronus novaezelandiae, bacterial count, New Zealand 2968
marine fishes, bacteria 2023
meat
Lactobacillus curvatus, strains, taxonomy 267
Lactobacillus sake, strains, taxonomy 267
Merluccius, microbial contamination, South Africa 2021
pathogens, chicken meat, carcasses, cold storage 2909
pigmeat, microbial contamination, meat production 2050
sausages, *Brochothrix thermosphacta*, detection, antibodies, UK 2058
semolina, packaging, storage 1923
shrimps
Clostridium botulinum, vacuum packaging, temperature, USA, Georgia 950
Pseudomonas fluorescens, control, glucose oxidase, catalase 116
wheat, water content, moulds, Tropics 1976
wines
Lactobacillus hilgardii, monitoring, lactic acid 93
yeasts, differentiation, fatty acids 1992
Sponges, antibacterial properties, *Listeria*, control 2137
Spore germination, inhibition, fatty acids, *Bacillus cereus* 1048
Spores, germination, *Bacillus cereus*, heat resistance 2190
Sporohalobacter marismortui, aromatic compounds, biodegradation, anaerobic digestion 3277
Sporolactobacillus, control, *Listeria monocytogenes* 3080
Sporomusa malonica, malonic acid, biodegradation, anaerobic conditions 2397
Sporotrichum
lignocellulose, biodegradation, isolation 2488

- Sporotrichum** *cont.*
tomato pomace
hydrolysis
feeds, production 462
proteins, production 462
- Sporotrichum pruinosum** (see *Phanerochaete chrysosporium*)
agricultural byproducts, saccharification, cellulase 2470
- Sporotrichum pulverulentum** (see *Phanerochaete chrysosporium*)
oak
leaves
phenols, biodegradation 1430
tannins, biodegradation 1430
- Sporotrichum thermophile**, cellulose, biodegradation, glucosidases 2755
- Sporulation**, culture media, temperature, effects, food safety, *Bacillus cereus*, spores 2827
- Sprouts**, storage, microbial activities, amines, production, determination 2011
- Stabilization basins**, sewage, treatment, pathogens, survival, brackish water, pH 294
- Stachybotrys atra**, air filters, contamination, satratoxins, production 204
- Stagospora gigaspora**, Kraft mill effluent, biodegradation 1731
- Stain fungi**
enzyme activity, wood, detection 2105
wood, biodeterioration, petroleum, fractions, control 2148
wood panels, biodeterioration 2101
- Stainless steel**
biofilms, formation, *Listeria monocytogenes*, nutrients 2111
- Listeria monocytogenes*
biofilms
control
monolaurin 2163
temperature 2163
survival 2109
- Salmonella typhimurium*, survival 2109
- surfaces
biofilms, bacteria, isolation 1023
Listeria monocytogenes, adhesion, biological control 3088
- Standards**
development, composts, USA 1245
drinking water, microbial quality 288
effluents, water reuse, irrigation 288
feeds
Bacillus cereus, enumeration 1
Salmonella, detection 2
- foods
Bacillus cereus, enumeration 1
Salmonella, detection 2
- microbiology
waterborne diseases
swimming
control
Europe 280
North America 280
- Staphylococcaceae**, food poisoning, enterotoxins 1950
- Staphylococcus**
bacterial count, beef, dried meat, Brazil 2040
colonization, poultry, plucking, machinery 2128
food industry, identification 2851
indicator species, bathing waters, coastal areas, microbial contamination 3156
meat, processing, equipment, benzalkonium chloride, resistance 240
poultry, carcasses, plucking, equipment, contamination 993
poultry meat, processing, equipment, benzalkonium chloride, resistance 240
resistance, quaternary ammonium compounds, foods, nucleotide sequences 3110
- Staphylococcus aureus**
bakery products
enterotoxins 907
survival 907
- Staphylococcus aureus** *cont.*
biofilms
control, antibiotics, instruments, medical treatment, microbial contamination, evaluation 3021
growth
control, culture, filters 3826
instruments, medical treatment, models 3022
chickens, carcasses, enterotoxins, production 2070
contamination, *Staphylococcus carnosus*, starter cultures, sausages, fermentation, detection 1899
control
antibacterial agents, plant oils, *Thymus vulgaris* 1051
chickens
carcasses
food additives 2070
pH 2070
temperature 2070
food, phosphates, metals, inhibition 1044
detection
flow cytometry, dyes 1893
polymerase chain reaction 45
disinfection, surfactants, efficiency 1054
enterotoxins
bakery products, modified atmosphere packaging, plastic film, Italy 1983
gene location, DNA probes 50
production, heat treatment, survival 1947
sterilized milk, food poisoning 2080
food poisoning, bacterial toxins 889
- foods
contamination, enterotoxins, detection, ELISA 36
enterotoxins
detection, enzyme immunoassay 41
production, identification, pulsed field electrophoresis 1898
- inactivation
electric field, pulsed, foods 3078
gamma radiation, beef, temperature, fat, effect 2145
- meat
contamination, South Africa 863
microbial contamination, China 130
- meat products
contamination, South Africa 863
microbial contamination, China 130
- microbial contamination
food, cook-chill system, Malaysia 1945
swimming pools, chloroisocyanurates 209
- milk, reviews 166
phenotypic stability
freeze drying, plasmids, viability 1810
storage, plasmids, viability 1810
polyphosphates, antimicrobial properties 1045
poultry, contamination, South Africa 863
processed foods, detection, ELISA 1082
recovery, surfaces, techniques, comparisons 1090
sashimi, contamination, USA 940
sea water, coastal areas, techniques, recovery, culture media 3159
spoilage, chicken meat, carcasses, cold storage 2909
survival, heat treatment, anaerobic conditions 1039
sushi, contamination, USA 940
- Staphylococcus auricularis**
dibenzofuran, biodegradation 3501
dioxins, biodegradation 3501
fluorene, biodegradation 3501
- Staphylococcus carnosus**, starter cultures, *Staphylococcus aureus*, contamination, sausages, fermentation, detection 1899
- Staphylococcus xylosus**
antimicrobial activity, sausages, *Listeria monocytogenes*, control 988
starter cultures, volatile compounds, formation, sausage, fermentation 147
- Starch**
biodegradation
Bacillus firmus, transferases, production 2568
bacteria, isolation, larvae amylases 1539
Bacterioides thetaiotaomicron, genetics 778
Clostridium thermocellum, β -amylase 798
glucanases, industrial applications 3387
heavy metals, electroplating waste water, anaerobes, methane inhibitors 1221
Humicola lanuginosa, growth effects, amylases, production 3604
microorganisms, anaerobic treatment, chemical properties, effects 3602
recycling 1549
Rhizomucor pusillus, growth effects, amylases, production 3604
Schwanniomyces occidentalis, enzymes, production, optimization, culture media, toxicity 1826
hydrolysis, *Saccharomyces cerevisiae*, enzymes 1547
polyethylene film, degradable, foods, packaging, microbial contamination 1924
polyethylene films, biodegradation, environmental factors, microorganisms 1543
utilization, propionic acid, production, *Propionibacterium* 1813
waste water
anaerobic digestion 3603
biodegradation, anaerobic treatment, bioreactors 349
utilization, *Spirulina platensis*, production, Thailand 1404
- Starter cultures**
Pediococcus peutosaceus, volatile compounds, formation, sausage, fermentation 147
Staphylococcus xylosus, volatile compounds, formation, sausage, fermentation 147
- Starters**, sausages, *Yersinia enterocolitica*, survival 986
- Statistical analysis**
detection, beef, carcasses, abattoirs, microbial contamination, Canada 2045
Listeria monocytogenes, heat resistance 1115
- Steam sterilization**
laboratories, biomedical wastes 3063
microbial contamination, control, spices, enzyme activity, evaluation 2942
- Steel**
Listeria monocytogenes, adhesion, nutrients, effects 1021
microbial corrosion, sulfate reducing bacteria 201
- Sterilized milk**, food poisoning, *Staphylococcus aureus*, enterotoxins 2080
- Sterilizing**, evaluation, drinking water, disinfection 2890
- Steroids**
production
sterols
fermentation
Arthrobacter globiformis 1412
Arthrobacter simplex 1412
Mycobacterium 1412
- Sterols**
fermentation
Arthrobacter globiformis, steroids, production 1412
Arthrobacter simplex, steroids, production 1412
Mycobacterium, steroids, production 1412
- Stone**, biodeterioration, fungi, polysaccharides 2113
- Stones**
biodeterioration, bacteria, isolation, Belgium 2117

Stones cont.

- monuments
- biodeterioration
- algae 2122
- fungi, melanins 2121

Stonework

- biodeterioration
- bacteria, control, biocides, UK 3013
- biofilms, *Penicillium frequentans* 202
- microorganisms, biofilms, ecology, Italy 3015
- churches, biodeterioration, lichens, Spain 2123
- monuments, biodeterioration 2119
- sandstone, microbial corrosion, Spain 2118

Storage

- Alcaligenes eutrophus*, phenotypic stability, plasmids, viability 1810
- bread, *Clostridium sporogenes*, spores, survival, baking 1982
- carrots, microbial contamination 104
- cauliflowers, microbial contamination 104
- eggs
 - Salmonella enteritidis* growth 2071
 - heat treatment, resistance 2990
- foods, toxinogenic fungi, Nigeria 269
- mayonnaise, *Escherichia coli*, survival, temperature 913
- melons
 - Escherichia coli*, survival, temperature 2007
 - keeping quality, pretreatment, comparison 1926
- microbial contamination, maize, *Aspergillus*, aflatoxins, Brazil 2934
- onions, shredding, microbial contamination, temperature, effects 933
- pigmeat, *Listeria monocytogenes*, survival 140
- poultry manure, fractionation, pathogens, survival 2240
- Pseudomonas putida*, phenotypic stability, plasmids, viability 1810
- saucers, meat, microbial contamination, heat treatment 90
- semolina, packaging, spoilage 1923
- smoked fish, *Listeria monocytogenes*, control, sodium chloride, packaging 2960
- soyabean flour, microbial contamination, packaging materials, comparisons 2935
- spinach, microbial contamination 104
- sprouts, microbial activities, amines, production, determination 2011
- Staphylococcus aureus*, phenotypic stability, plasmids, viability 1810
- temperature
 - meat products, *Clostridium botulinum*, survival, toxins, production, vacuum packaging 1922
 - oysters, *Vibrio parahaemolyticus*, survival 2020
 - pasta, *Clostridium botulinum*, survival, toxins, production, vacuum packaging 1922
 - sausages, keeping quality, microbial flora 2057
 - vegetables, microbial contamination 104
- watermelons, *Escherichia coli*, survival, temperature 2007

Storage decay

- apples
 - Botrytis cinerea* 106
 - fungi, biological control + *Bacillus* 2006
 - Penicillium* 106
 - control, onions, gamma radiation + carbendazim 932
 - kiwifruits, *Phialophora* 109
 - molasses 85
 - onions, *Aspergillus niger*, India, Karnataka 110
 - potatoes, microbial contamination, *Erwinia carotovora*, population dynamics 927
 - soyabeans, fungi, control 82
 - wheat, fungi, control, essential oils 1978

Storage life

- chicken meat, carcasses, Saudi Arabia 150
- extension
- semolina
- irradiation
 - bacteria, control, India 1037
 - insect pests, control, India 1037
 - moulds, control, India 1037
- smoked fish, salmon, vacuum packaging, microbial contamination 2019

Storage quality

- fodder, fungi, aflatoxins, production, poultry 897
- smoked fish, packaging, controlled atmospheres 949

Stored products, *Cyperus esculentus*, bacterial control 934**Stored products pests**

- control
 - gamma radiation, grain legumes 2144
 - pesticides, grain stores, farms 2932
- pulses, *Callosobruchus chinensis* 906
- rice, fatty acids, temperature 81
- Switzerland 273
- Tyrophagus longior*, control, acaricidal plants, essential oils 3079

Straw

- biodegradation
 - mushroom compost, production, temperature, nitrogen 1238
 - Streptomyces cyaneus*, xylanases, characterization 2749
 - Thermoactinomyces*, isolation, culture media 1825
- composting, effects, chlorophenol, biodegradation, soil 3533
- piggery effluent
 - anaerobic digestion 751
 - methane production, anaerobic digestion 493
- poultry manure, composting, aeration, temperature 1254
- poultry manure enzymes, polysaccharides, addition, mushroom compost, production, microbial activities, effects 1243

Streams, microbial contamination, faecal coliforms, mathematical models 1127***Streptomyces chromofuscus*, physiology, pulp mill effluent, dechlorination 3777*****Streptococcaceae*, coliform bacteria, sewerage, monitoring 3175*****Streptococcus***

- cheeses, *Enterococcus*, enumeration 2906
- identification, RNA probes 2847
- meat, *Enterococcus*, enumeration 2906
- pigmeat, antibiotics, resistance 1112
- water, antibiotics, resistance 1112

Streptococcus agalactiae*, milk, reviews 167**Streptococcus faecalis***

- inhibition, *Lactobacillus acidophilus*, bacteriocins 1061
- microbial contamination, swimming pools, chloroisocyanurates 209
- silage making, pig manure + wheat straw, fermentation, molasses, inoculation 760

Streptococcus thermophilus

- bacteriocins
- production 2729
- Listeria monocytogenes*, control 3084

Streptomyces

- agricultural wastes, biodegradation, xylanase, production 3804
- Aspergillus*, *Bacillus*, *Trichoderma*, coir, biodegradation, composting 2468
- cellulose, biodegradation, cellulase, activity 3512
- cellulosic wastes, biodegradation, cellulase, activity 3512
- composts, isolation, cellulase, production 1784
- soil, isolation, cellulase, production 1784
- xylan, biodegradation, xylanase, characterization 3524
- Streptomyces aureofaciens*, benzyl thiocyanate, metabolism 659

Streptomyces chromofuscus*, azo compounds, biodegradation, peroxidases 1449**Streptomyces cyaneus***

- straw, biodegradation, xylanases, characterization 2749
- xylan, biodegradation, xylanases, characterization 2749

Streptomyces filamentosus* + *Chlorella saccharophylla*, nitrogen, metabolism 3717**Streptomyces griseus*, *Streptomyces clavuligerus*, cadmium, bioaccumulation, industrial wastes 647*****Streptomyces hygroscopicus*, cellulose, biodegradation, cellulase, production 3523*****Streptomyces lividans*, xylan, genetics, disruption 802*****Streptomyces noursei*, biomass, wastes, drugs, production, heavy metals, uptake, mathematical models 1585*****Streptomyces reticuli*, enzymes, cellulose, biodegradation 2747*****Streptomyces rochei***

- chlorohydroxyquinol, biodegradation, enzymes, characterization 1516
- physiology, pulp mill effluent, dechlorination 3777

Struvite

- production
 - sewage, anaerobic digestion 1379
 - sewage sludge, anaerobic digestion 1379
 - sludges, anaerobic digestion 1379

Styrene

- biodegradation
 - aquifers, soil 576
 - bacteria, methodology 577
 - fungi, biological filtration, waste gases 3605
 - microorganisms, reviews 2515
 - Mycobacterium vaccae*, soil, metabolites, toxicity 574

Substrates

- microbial degradation, bioreactors, mathematical models 1200
 - numbers, effects, phenol, biodegradation, mathematical models 3586
 - transformation, enhancement, microorganisms, consortia, immobilization, reviews 3821
 - upgrading, microorganisms 286
- Sucralose**
- biodegradation
 - lakes, microorganisms, catabolism 1438
 - sediment 2562
 - soil 2562
 - microorganisms, catabolism 1438
 - water 2562

Sucrose

- concentration, effects, *Salmonella typhimurium*, growth 2192
- utilization, *Lactobacillus* 3610

Sugar

- utilization
 - Propionibacterium acidipropionici* propionic acid, production 479
 - vitamins, production 479

Sugar factory waste

- anaerobic treatment 722
- utilization
 - Anacystis*, hydrogen, production 1407
 - Rhodospseudomonas*, hydrogen, production 1407
 - waste water treatment
 - activated sludge 713
 - biological filtration 713

Sugar industry, waste water, anaerobic treatment, yeasts, immobilization, ethanol production 721**Sugar refineries, waste water, anaerobic treatment, biological filtration, Japan 719****Sugarcane, washing, waste water, biological treatment, anaerobic digestion, USA 712**

Sugarcane bagasse

- biodegradation
 - citric acid, production, *Aspergillus niger* 467
 - composts, hydrocarbons, production 1477
 - single cell protein, production 699
 - Thermomonospora curvata*, cellulase, production 716
- fermentation
 - Aspergillus phoenicis*, cellulase, production 3510
 - Trichoderma longibrachiatum*, cellulase, production 3510
- utilization
 - Cellulomonas flavigena*
 - mutants, isolation 2481
 - Xanthomonas*, growth, interactions 699

Sugarcane byproducts

- biogas, production 488
- fuels, production 488

Sugarcane trash

- utilization
 - proteins, production, *Aspergillus fumigatus* 554
 - sugars, production, *Penicillium oxalicum* 554

Sugars

- fermentation, *Escherichia coli*, ethanol production 2567
- production
 - lignocellulose, biodegradation, fungi 2480
 - plant residues, utilization, *Penicillium oxalicum* 554
 - sugarcane trash, utilization, *Penicillium oxalicum* 554
- utilization, *Bacillus circulans*, xylanase, production 608

Sulfate pulping

- effluents
 - organochlorine compounds
 - removal
 - Ancyllobacter aquaticus* 2417
 - Methylobacterium* 2417
 - Pseudomonas* 2417
- waste water
 - lignin
 - biodeterioration, wood destroying fungi 2656
 - discoloration, *Coriolus versicolor*, gluconolactone, effects 2658

Sulfate reducing bacteria

- acid mine drainage, techniques, characterization, DNA probes 311
- chromium
 - soil, reduction 3405
 - water, reduction 3405
- control
 - biocides
 - instrumentation, screening 2154
 - pipelines, biofilms, physical models 3028
 - formaldehyde
 - pressure, effects 3052
 - temperature, effects 3052
 - isothiazolone
 - pressure, effects 3052
 - temperature, effects 3052
- dibenzothiophene, biodegradation 2651
- hydrocarbons, production 776
- isolation
 - dimethyl sulfoxide, biodegradation, anaerobic digesters, sludges 3445
 - methylmercaptan, biodegradation, anaerobic digesters, sludges 3445
- methanogens
 - interactions
 - hydrogen sulfide, models 2709
 - pH, models 2709
 - waste waters, bioreactors, anaerobic treatment 1788
- methylmercury
 - production, lakes, anaerobic conditions, Finland 3857
 - transformation, sediment, anaerobic conditions 3664

Sulfate reducing bacteria cont.

- mining wastes, techniques, characterization, DNA probes 311
- morphology, oilfields, equipment, corrosion 200
- occurrence, groundwater, oilfields, Russia 3404
- oilfields
 - equipment, corrosion, marine environment 199
 - reservoirs, hydrogen sulfide, remission 726
- polluted soils, techniques, characterization, DNA probes 311
- steel, microbial corrosion 201
- sulfates, reduction, bioreactors 2603
- toluene, biodegradation, iron, enhancement, anaerobic conditions, USA 3542
- waste water, biological treatment, aerobic conditions, reviews 1196

Sulfates

- chlorinated phenols, biodegradation, microorganisms, sediment 3596
- effects, waste water, aerobic treatment, biological fixed-film systems 1214
- gypsum, decomposition, bacterial leaching, *Desulfovibrio desulfuricans* + *Chlorobium thiosulfatophilum* 2612
- oxidation, thermophilic microorganisms, India 2610
- production
 - hydrogen sulfide, biodegradation, *Thiobacillus thiooxidans* 650
 - sulfur + ferric hydroxide, metabolism, sediment, marine environment, chemolithotrophic bacteria 3692
- reduction
 - Desulfacinum infernum*, new species, North Sea 2713
 - porous media, *Desulfovibrio desulfuricans*, kinetics 3680
 - sewerage, biofilms, growth, oxygen 3356
 - sulfate reducing bacteria, bioreactors 2603
- sewage, biological treatment, anaerobes 3814
- transport processes, mass flow, methanogenic bacteria, sulfate reducing bacteria, competition, models 669
- utilization
 - Chlorobium limicola*, genetic transformation 1807
 - yeasts 651
- waste water, biological treatment, anaerobes 3814

Sulfides

- acid mine drainage, microbial leaching, North America 3792
- formation, biofilms, sewerage 1191
- ores, bacterial leaching, bacteria 744
- organic compounds, toxicity, removal, waste water, biological treatment, *Thiobacillus denitrificans* 3430
- oxidation
 - Desulfohalobus propionicus* 3852
 - Thiobacillus thiooxidans*, determination 2611
- production
 - sewage, *Desulfovibrio desulfuricans*, inhibition, kinetics 666
 - waste water, *Desulfovibrio desulfuricans*, inhibition, kinetics 666
- sewage, biological treatment, anaerobes 3814
- waste water, biological treatment, anaerobes 3314

Sulfite pulping

- pentosan, removal, *Aureobasidium pullulans*, enzymes 1722
- wastes
 - bioleaching, *Trametes versicolor* 3779
 - delignification
 - Trametes versicolor* 3779
 - manganese peroxidase, production 3778
- xylan, biodegradation, *Aureobasidium pullulans* enzymes 3775

Sulfite reducing bacteria

- Clostridium*
 - drinking water, enumeration, comparison 2896
 - groundwater, enumeration, comparison 2896
 - sewage effluent, enumeration, comparison 2896
 - surface water, enumeration, comparison 2896

Sulfonamides

- biodegradation
 - Hansenula* 500
 - Nocardia* 500
 - Rhodococcus* 500

Sulfonates

- biodegradation, bacteria, cultures 2584
- utilization, yeasts 651

Sulfur

- metabolism, *Desulfohalobus ambivalens*, enzymes 1814
- oxidation
 - sewage sludge, *Thiobacillus*, sulfuric acid, production 661
 - soil, heterotrophic microorganisms, efficiency 656
 - Thiobacillus*
 - bacterial leaching 1600
 - bioreactors, oxygen, effects 3689
- production
 - hydrogen sulfide
 - biodegradation, *Thiobacillus thiooxidans* 650
 - removal, biological filtration 3708
- reduction
 - Pyrococcus furiosus* 2614
 - enzymes 3679
 - thermophilic microorganisms, metabolism, reviews 1802
- removal
 - gases, microorganisms, reviews 3681
 - liquids, microorganisms, reviews 3681
 - natural gas, *Thiobacillus ferrooxidans* 3547
 - petroleum oil, *Thiobacillus ferrooxidans* 3547
 - Thiobacillus ferrooxidans*, adhesion 3795
- utilization
 - Desulfohalobus* 3682
 - Hydrogenobacter acidophilus*, new species, Japan 2715

Sulfur + ferric hydroxide, metabolism, sulfates, production, sediment, marine environment, chemolithotrophic bacteria 3692**Sulfur fertilizers, sulfur, utilization, soil, microorganisms, biomass 632****Sulfuric acid**

- production
 - sewage sludge
 - sulfur, oxidation, *Thiobacillus* 661
 - thiosulfates, oxidation, *Thiobacillus* 661

Sunflower husks, biodegradation, basidiomycotina 3516**Sunflower meals, biodegradation, fungi, enzyme activity 2495****Sunlight, sewage, disinfection 227****Surface water**

- atrazine, biodegradation, bacteria 621
- coliform bacteria, detection, spectrofluorometer 3137
- contamination
 - faces, *Plesiomonas shigelloides*, temperature, effects 2226
 - Listeria* 1102
- faecal coliforms, detection, spectrofluorometer 3137
- faecal flora, contamination, Barbados, enumeration, comparisons 1860
- Gram negative bacteria, bacterial count 22
- microbial contamination
 - coliform bacteria
 - control
 - filtration 3165
 - floculation 3165
 - irradiation 3165
 - rotavirus, Brazil 3364

Surface water cont.

- pharmaceutical products, waste water, biodegradation, mathematical models 1682
- pollution, sewage, water quality, criteria, Russia 3141
- simazine, biodegradation, bacteria 621
- sulfite reducing bacteria, *Clostridium*, enumeration, comparison 2896
- viruses, techniques, detection, DNA probes 2868

Surfaces

- contamination
 - Salmonella enteritidis* survival
 - biocides 2854
 - temperature 2854
- disinfectants, efficiency, testing 1057
- Escherichia coli*
 - enumeration 1941
 - recovery, techniques, comparisons 1090
- metals, biofilms, disinfection, monochloroamine 2164
- Pseudomonas aeruginosa*, recovery, techniques, comparisons 1090
- rhinovirus, disinfection 2160
- Staphylococcus aureus*, recovery, techniques, comparisons 1090
- titanium, contamination, bacteria, enumeration, dyes 3011

Surfactants

- alkanes
 - removal
 - sewage, biological treatment, efficiency 3636
 - sewage sludge, biological treatment, efficiency 3636
- alkylbenzenesulfonate, biodegradation, *Pseudomonas putida*, sulfur, utilization 3641
- alkylphenol ethoxylate, biodegradation, *Pseudomonas*, isolation, activated sludge 3640
- biodegradation
 - activated sludge 3642
 - aerobic conditions, evaluation, pressure transducers 3643
 - anaerobic digestion, methane production 1567
 - bacteria, sediment, rivers, interactions 3637
 - biological treatment
 - activated sludge 2581
 - anaerobic digestion 2581
 - reviews 1568
 - books 2795
 - environment, reviews 1568
 - interactions 633
 - reviews 3648
 - sea water, techniques, determination 2583
 - sewage, treatment, activated sludge, Switzerland 635
 - sewerage, UK 3649
 - techniques, estimation, methodology 636
 - waste water treatment, lagoons, Spain 637
- effects
 - biphenyls, biodegradation, microorganisms, soil 3572
 - naphthalene, biodegradation, microorganisms 3508
 - phenanthrene
 - biodegradation
 - microorganisms 3508
 - soil 3572
 - sediment 3557
- efficiency
 - Listeria monocytogenes*, disinfection 1054
 - Pseudomonas aeruginosa*, disinfection 1054
 - salmonella typhimurium*, disinfection 1054
 - Staphylococcus aureus*, disinfection 1054
- enhancement, pollutants, hydrophobic, biodegradation, *Pseudomonas* 3401

Surfactants cont.

- hydrocarbons
 - biodegradation
 - Pseudomonas oleovorans* 1502
 - Pseudomonas putida* 1502
- ligninase, production, *Phanerochaete chrysosporium* 634
- linear alkylbenzene sulfonate
 - biodegradation
 - sewage
 - treatment
 - application to land, ecosystems, toxicology, Spain 3639
 - composting, ecosystems, toxicology, Spain 3639
- microorganisms
 - coke, wastes, aromatic hydrocarbons, biodegradation, bioremediation 3800
 - production, heavy metals, polluted soils, bioremediation 3651
 - molybdenum, bacterial leaching, *Thiobacillus ferrooxidans* 1753
- organic compounds
 - biodegradation, microorganisms, reviews 2402
 - non aqueous liquids, biodegradation, enhancement, soil 3462
- production
 - alkanes, biodegradation, bacteria, lipids 1792
 - bacteria, biotechnology, reviews 3546
 - Pseudomonas maltophilia* 2738
- rivers, biodegradation, bacteria, mathematical models, UK 3646
- sulfonates
 - biodegradation
 - biological filtration 3644
 - organic compounds, refractory, detection 3645

Surgical equipment, gloves, microbial flora, survival 207**Surgical instruments**

- disinfection, microbial contamination 208
- viruses
 - inactivation
 - copper 3092
 - iron 3092

Surimi, microbial flora 129**Surveys, ice cream, microbial contamination, UK 2839****Sushi**

- contamination
 - anisakidae, USA 940
 - Bacillus cereus*, USA 940
 - Staphylococcus aureus*, USA 940

Suspended solids, removal, nitrification, activated sludge, biological filtration 3305**Sweden**

- denitrification, activated sludge, upgrading 1777
- nitrogen, removal, biological filtration, sand 1603
- nutrients, removal, activated sludge, methanol, addition 3704
- phosphorus
 - removal
 - biological filtration, sand 1603
- sewage sludge, biological treatment 3706
- pulp mill effluent
 - activated sludge 1710
 - treatment, biological fixed-film systems + activated sludge 1702

waste water

- Nitrobacter*, characterization, ELISA 1816
- Nitrosomonas*, characterization, ELISA 1816
- waste water treatment
 - biological treatment
 - nitrogen, removal 2618
 - phosphorus, removal 2618

Sweet potatoes, hydrolysis, hydrochloric acid, yeasts, fermentation, ethanol production 3378**Swimming**

- health hazards, sea water, contamination, sewage effluent disposal, South Africa 2833
- sewage effluent disposal, beaches, water-borne diseases, surveys, Australia 2832

Swimming pools

- microbial contamination
 - assessment, South America 3030
 - bacteria, control, chloroisocyanurates 209
 - faecal coliforms 3032
 - pathogens, recovery, culture media 2856

Switzerland

- fish products
 - contamination
 - Listeria monocytogenes*
 - fish farming 944
 - fish processing 944
- stored products pests 273
- surfactants, biodegradation, sewage, treatment, activated sludge 635
- wastes, composting 3285

Syncephalastrum racemosum*, aromatic hydrocarbons, oxidation 3567**Synechococcus***

- gene expression, *Pseudomonas syringae*, gene transfer, carbon dioxide, biodegradation, ethylene, production 1786
- minerals, formation 1113

Synechocystis

- organotin compounds, sorption 612
- tributyltin, sorption 612

2,4,5-T, biodegradation, *Nocardioideis simplex* 3618**D-tagatose, production, galactitol, biodegradation, *Enterobacter agglomerans* 475****Taiwan**

- amines, biodegradation, oil refinery wastes, activated sludge 1693
- boats
 - fishing
 - biofouling
 - Balanus amphritite* 3040
 - Dexiospira* 3040
 - Tanais caolinii* 3040
- dyes, azo compounds, decolorization, *Pseudomonas luteola* 1738
- piggery effluent, ammonia, removal, bacteria 2621
- wastes, biological treatment 3252

Talaromyces emersonii

- food processing, wastes, ethanol production, *Kluyveromyces marxianus* 3385

- uranium, water, sorption 2593

Talc

- supports
 - waste water, anaerobic digestion 1233
 - wastes, anaerobic digestion 1233

Tallow

- hydrolysis
 - Aspergillus niger* 2681
 - Geotrichum candidum* 2681
 - Mucor miehei* 2681

Tanais caolinii*, boats, fishing, biofouling, Taiwan 3040*Tannery waste**

- anaerobic digestion
 - heavy metals, uptake, algae 1586
 - methane production, kinetics 3390
- catechin, biodegradation, *Pseudomonas solanacearum*, enzymes, production 3783
- nitrification, biological fixed-film systems, inhibition 3739

Tannins

- biodegradation, oak, leaves, *Sporotrichum pulverulentum* 1430
- foods, microbial contamination, bacteria, control 3099

Tanzania

- cereals, fermentation, pathogens, inhibition, variation 2946
- waste water, biological treatment, ponds, pathogens, mortality, mathematical models 2336

Taxonomy

- Desulfurella acetivorans*, DNA sequencing 3835
- meat
- spoilage
 - Lactobacillus curvatus*, strains 267
 - Lactobacillus sake*, strains 267
- Methanobacterium defluvii*, anaerobic digesters, sewage sludge 3179
- Methanobacterium thermoflexum*, anaerobic digesters, sewage sludge 3179
- mineral waters, *Pseudomonas* 1912
- nitrilotriacetic acid biodegradation
 - Chelatobacter* 3421
 - Chelatococcus* 3421

Techniques

- alkali treatment, sewage sludge, faecal flora, inactivation 1140
- analysis
 - comparisons
 - mortar, microbial corrosion, Spain 1909
 - paintings, microbial corrosion, Spain 1909
 - Klebsiella pneumoniae*, biofilms, thickness, variability 2706
 - methane production, microorganisms, anaerobic digesters 299
 - Pseudomonas aeruginosa*, biofilms, thickness, variability 2706
 - spectroscopy, wood, cells, biodegradation, wood destroying fungi 2106
 - x-ray photoelectron spectroscopy, gold, uptake, *Chlorella vulgaris* 2596
- assays
 - chitin
 - biodegradation
 - Bacillus pabuli*, chitinase 823
 - bacteria, chitinase 823
 - water, quality, monitoring, bacteria, indicator species 27
 - wood destroying fungi, enzyme activity 1851
- assessment
 - activated sludge
 - bacteria, bacterial count 1303
 - operation, toxic substances, effects 2329
 - bioassays, refuse, landfills, methane production 2245
 - chemicals
 - biodegradation
 - soil 1459
 - water 1459
 - comparisons
 - Aeromonas hydrophila*, growth, temperature 2199
 - milk preservation, lactoperoxidase system, microbial contamination 2081
 - DNA hybridization, foods, irradiation, microbial contamination, control 1038
 - dyes, removal, activated sludge, performance 391
 - fruit, microbial contamination, hospital food service, food hygiene, Costa Rica 2828
 - ham, processing, food hygiene, Italy 2829
 - modification, polymers, biodegradation, aquatic environment 300
 - nucleic acids, hybridization, poultry meat, *Campylobacter*, USA 871
 - organic compounds, biodegradation 2247
 - poultry
 - carcasses, microbial contamination 2989
 - skin, microbial contamination, *Salmonella*, control, disinfectants 997
 - salads, microbial contamination, hospital food service, food hygiene, Costa Rica 2828
 - swimming pools, microbial contamination, South America 3030

Techniques cont.

- assessment cont.
 - toxic chemicals, biodegradation, environment, aerobic conditions 3412
 - toxicity, petroleum hydrocarbons, sludges, polluted soils, bioremediation 2267
- bacterial count
 - poultry, carcasses, abattoirs 911
 - surface water, Gram negative bacteria 22
- bioassays
 - biochemical oxygen demand, determination, waste water treatment, effluents 296
 - drinking water, bacteria 2181
 - evaluation
 - aromatic hydrocarbons, utilization, bacteria 1513
 - chlorinated hydrocarbons, utilization, bacteria 1513
 - microcystins, production, cyanobacteria, fresh water, Canada 3095
 - sewage, disinfection, ultra violet radiation 305
 - waste water, disinfection, ultra violet radiation 305
 - yeasts, optimization, trichothecenes 894
- calorimetry, *Cucumis sativa*, laccase, characterization 1832
- carbonaceous biochemical oxygen demand
 - evaluation
 - sewage 2249
 - sewage effluent 2249
 - waste water 2249
- characterization
 - alcohols, production, *Saccharomyces cerevisiae*, isolation 3131
 - aromatic compounds, biodegradation, *Phanerochaete chrysosporium*, enzymes 508
 - aromatic hydrocarbons, biodegradation, *Sphingomonas* 3183
 - Aspergillus*, xylanases, production, India 2764
 - Aspergillus oryzae*, antioxidants, production 2760
 - bakery industry, effluents, microbial flora 697
 - beverages, production, *Saccharomyces cerevisiae*, isolation 3131
 - biphenyl, biodegradation, bacteria, soil, pollution 3484
- books
 - enzymes 2814
 - microorganisms 2814
- chicken meat, *Pseudomonas*, Jamaica 992
- 4-chloro-2-methylphenol, biodegradation, bacteria 2542
- DNA probes
 - acid mine drainage, sulfate reducing bacteria 311
 - mining wastes, sulfate reducing bacteria 311
 - polluted soils, sulfate reducing bacteria 311
- ELISA
 - waste water
 - Nitrobacter*, Sweden 1816
 - Nitrosomonas*, Sweden 1816
 - foods, *Acinetobacter* 1074
 - health centres, wastes, *Acinetobacter* 1074
 - hospitals, wastes, *Acinetobacter* 1074
 - identification, polychlorophenols, biodegradation, *Mycobacterium fortuitum* 3422
 - isoenzymes, electrophoresis, *Pseudomonas cepacia* 1081
 - Lactobacillus*, strains, reviews 46
 - liquid chromatography, *Penicillium* 3127
 - Listeria*, strains 47
 - Listeria monocytogenes*, genes 3112
 - mineral waters, contamination, microbial flora 24

Techniques cont.

- characterization cont.
 - mycotoxins, *Pichia farinosa* 2928
 - oilfields
 - machinery, microbial flora, biofilms 3895
 - water, microbial flora, biofilms 3895
- optimization
 - anthracene, biodegradation, *Bjerkandera*, species 3561
 - benzo-a-pyrene, biodegradation, *Bjerkandera*, species 3561
 - plastic pipes, biodeterioration, bacteria, water supply, biofilms, formation, dental health 2838
 - polychlorinated biphenyls, biodegradation, bacteria, soil, pollution 3484
- RNA probes
 - activated sludge, bacteria 1155
 - biological fixed-film systems, microbial flora 2703
- sausage, *Lactobacillus sake* 244
- sausages, microbial flora, Greece 983
- screening, lignin, biodegradation, bacteria 3535
- thermal springs, *Caldicellulosiruptor lactoaceticus*, new species, cellulolytic microorganisms 2724
- waste water, contamination, *Rhodocyclus gelatinosus* 1908
- waste water treatment
 - activated sludge, microbial flora, Germany 400
 - aerobic treatment, bioreactors, bacteria 343
 - anaerobic digestion, granular sludge, production, *Veillonella* 785
 - bioreactors, microbial flora, Germany 400
- chromatography, polyphenols, hydroxytyrol, purification, olive oil, waste water 587
- classification, organic compounds, biodegradation, anaerobic conditions 3452
- comparisons
 - surfaces
 - Escherichia coli*, recovery 1090
 - Pseudomonas aeruginosa*, recovery 1090
 - Staphylococcus aureus*, recovery 1090
- concentration
 - drinking water, polioviruses, contamination 2864
 - microfiltration, drinking water, viruses 2867
 - polluted water, *Entamoeba histolytica*, India 2778
 - water, viruses, cellulose, coagulation 2865
 - water purification, algae 3788
- control
 - activated sludge, bulking, foaming, France 1314
 - anaerobic digesters, performance, neural network 3184
 - food safety, microbial contamination, food industry, reviews 1931
 - organic acids, meat products, *Listeria monocytogenes* 1049
- culture
 - bacteriocins, production, optimization, lactic acid bacteria 886
- filters
 - Pseudomonas aeruginosa*, biofilms, growth, control 3826
 - Staphylococcus aureus*, biofilms, growth, control 3826
- culture media
 - evaluation, *Listeria monocytogenes*, recovery 2204
 - water systems, isothiazolone, treatment, antibiotic resistance, *Pseudomonas aeruginosa* 1028

Techniques cont.

culture techniques

Aeromonas, enterotoxins, production 1946

apple pomace, proteins, enrichment, cellulolytic moulds + yeasts 2371

chlorinated hydrocarbons, biodegradation, microbial flora 2462

inoculation methods

foods

Listeria, recovery, isolation 873

Salmonella, recovery, isolation 873

cultures techniques, enrichment, chlorinated hydrocarbons, biodegradation, aerobes 2400

detection

air, microbial contamination, buildings, Spain 1872

air microbiology, equipment, comparisons 2852

animal manures, fumonisins 895

antibodies, sausages, spoilage,

Brochothrix thermosphacta, UK 2058

assays

foods, *Salmonella* 1939

groundwater, bacteriophages, *Salmonella*, faecal coliforms, interactions, USA, Alabama 19

bacteria, foods 1958

beef, *Escherichia coli* 2043

beverages, microbial contamination, yeasts 1994

bioassays

beta-glucuronidase, water, *Escherichia coli* 3904

cyanobacteria, toxicity 3134

foods, *Clostridium botulinum* 1853

human faeces, *Clostridium botulinum* 1853

soil, *Clostridium botulinum* 1853

biosensors, *Listeria*, polymerase chain reaction, products 3893

books

enzymes 2814

microorganisms 2814

bottled water

contamination

Pseudomonas aeruginosa, Canada 917

Salmonella, Canada 917

cereal products, fumonisins 895

cheeses, *Listeria monocytogenes* 2090

chicken, skin, *Salmonella* 151

Clostridium botulinum, bacterial toxins 53

comparisons

enterovirus, water 2879

shellfish, contamination,

polioviruses, Morocco 2786

culture media

bacteria, growth, inhibition 2780

coliform bacteria 1857

drinking water

chlorinated

coliform bacteria 3192

Escherichia coli 3192

Escherichia coli 1857

foods, contamination, *Salmonella* 2912

meat products, *Listeria monocytogenes* 870

Salmonella 2874

soil, cellulolytic microorganisms 3892

dairy factories, *Listeria* 2206

DNA amplification, bacteria, *Legionella pneumophila* + *Acanthamoeba castellanii* 1901

DNA probes

effluents, viruses 2868

Escherichia coli, toxins 60

groundwater, viruses 2868

Techniques cont.

detection cont.

DNA probes cont.

meat

contamination, *Escherichia coli*, toxins, production, USA 2918

Salmonella 2972

oilfield water injection systems, corrosion, *Desulfobacter* 1689

polymerase chain reaction, foods, cheeses, *Clostridium*

tyrobutyricum 253

seafoods, contamination, *Escherichia coli*, toxins, production, USA 2918

surface water, viruses 2868

dried skim milk, *Salmonella* 881

eggs

contamination, *Salmonella enteritidis*, phenotypes 2995

Listeria 1004

electrical activity, foods, spoilage, yeasts 1928

electrical conductivity, fruit juices, contamination, yeasts 2945

ELISA

Clostridium aldrichii, anaerobic digesters 1818

foods

contamination, enterotoxins, *Staphylococcus aureus* 36

Salmonella typhimurium 2911

processed foods, *Staphylococcus aureus* 1082

water, viruses 2884

endotoxins, air 2919

enzyme immunoassay

dried milk, *Salmonella* 42

foods

enterotoxins, *Staphylococcus aureus* 41

Salmonella 42

paralytic shellfish poisoning, bacterial toxins 123

shellfish, food poisoning, toxins 2027

Escherichia coli 1106, 3899

evaluation, drinking water, contamination, *Legionella pneumophila* 2853

feeds

poultry, contamination, aflatoxins 71

Salmonella, standards 2

flours, wheat flour, citrinin 2926

flow cytometry

dyes

Salmonella typhimurium 1893

Staphylococcus aureus 1893

monoclonal antibodies, *Salmonella*, serotypes 1859

fluorescence, bacterial toxins 1948

foodborne diseases, pathogens,

reviews 875

foods

Bacillus cereus, enterotoxins 2920

cold storage, *Listeria*, cold injury, viability 1109

coliform bacteria 879

contamination

Clostridium botulinum 38

Salmonella 39

Escherichia coli 879

microbial contamination 876

pathogens 2871

Salmonella 51, 881, 2775

antigen antibody reactions

1084

reviews 37

standards 2

fumonisins

milk

ELISA 175

liquid chromatography 175

fungi, chitinases 2785

gas chromatography+mass spectrometry, drinking water, *Legionella pneumophila*, biofilms 1906

Techniques cont.

detection cont.

gene probes, assays, water, *Escherichia coli* 2720

genetically engineered microorganisms, environment 2777

genetics, *Escherichia coli*, genetically engineered microorganisms, environment 1141

groundwater, enterovirus 2773

identification, *Listeria*, reviews 2788

immunoassay

chickens, carcasses, washing, waste water, *Salmonella* 1845

comparisons, *Bacillus cereus*, enterotoxins, production 57

foods

contamination, *Salmonella* 883

moulds, reviews 1929

immunoassays

monoclonal antibodies, polluted water, faecal flora 3191

Nitrosomonas europaea 3878

immunodiffusion tests

foods

Salmonella

Canada 1934

USA 1934

meat

Salmonella

Canada 1934

USA 1934

immunology, sewage, hepatitis A

virus 2826

immunomagnetic separation, dried

skim milk, *Salmonella* 2096

indicator species, *Escherichia coli*,

water pollution, rivers, India 1125

infant foods, microbial contamination,

Citrobacter freundii 848

iron, supplements, eggs, *Salmonella*

enteritidis 1896

Legionella, water, rapid methods 851

liquid chromatography

fusarochromanone

maize 75

wheat 75

toxins, shellfish 2955

Listeria ivanovi, polymerase chain

reaction, DNA probes 815

Listeria monocytogenes

Listeria innocua, interactions

2208

viability, tetrazolium dyes, comparisons 849

maize, fumonisins 895

mass spectrometry, microorganisms,

books 2810

meat

Escherichia coli, bacterial toxins

3896

refrigeration, *Pseudomonas*

fluorescens, ELISA 872

milk, *Salmonella* 2084

nucleic acids, water samples, viruses

2863

organic compounds

biodegradation, bacteria, physiology 3492

refractory, surfactants, sulfonates,

biodegradation, biological

filtration 3645

peptone, foods, *Salmonella* 1940

phenolic compounds, biodegradation,

fungi 3581

polluted water, poultry farming,

Campylobacter 3894

polyclonal antibodies, patulin 1966

polymerase chain reaction

beef

Clostridium perfringens 2041

Salmonella 3

chicken meat, *Salmonella* 48

coliform bacteria, water 856

drinking water, hepatitis A virus

3903

enterovirus, sewage sludge 1144

Escherichia coli

viability, heat stress 43

Techniques cont.

detection cont.

polymerase chain reaction cont.

Escherichia coli cont.

water 856

foodborne diseases, pathogens 30

foods

Aerococcus viridans 1935*Clostridium botulinum* 1853*Listeria monocytogenes* 1935*Yersinia enterocolitica* 1935

hepatitis A virus 3091

sewage sludge 1144

human faeces, *Clostridium botulinum* 1853

lactic acid bacteria, histidine

decarboxylase, genes 2781

Listeria monocytogenes, viability,

heat stress 43

metals, *Listeria monocytogenes*

1904

milk, contamination, *Listeria**monocytogenes* 16neurotoxins, production, *Clostridium**botulinum* 2922oysters, *Salmonella* 2961pigmeat, contamination, *Listeria**monocytogenes* 16

polluted water, adenoviridae 3188

rivers, water, hepatitis A virus

3187

sewage

adenoviridae 3188

hepatitis A virus 3903

shellfish, hepatitis A virus 2967

soil, *Clostridium botulinum* 1853

water

Campylobacter coli 821*Campylobacter jejuni* 821

pathogens 2861

viruses 2862

Yersinia enterocolitica 2876

poultry meat

Salmonella 881*Salmonella typhimurium* 2774

rapid methods

drinking water, coliform bacteria,

India 1915

milk products, coliform bacteria

2094

poultry, feeds, *Salmonella* 1968-

1969

reference materials, foods, *Listeria**monocytogenes* 1942

reversed transcription, shellfish, hepa-

titis A virus 2967

RNA probes, *Yersinia enterocolitica*,

detection 3897

sausages, fermentation, *Staphylococcus**carnosus*, starter cultures,*Staphylococcus aureus*, contami-

nation 1899

screening, polycyclic hydrocarbons,

biodegradation, microorganisms,

sewage sludge 813

SDS-PAGE

enzymes

cellulase

production

Bacillus subtilis 1785*Myrothecium verrucaria* 1785*Trichoderma reesei*

1785

sea water, *Escherichia coli*, beta-

galactosidase, activity 3125

sewage sludge, *Campylobacter* 1858

shellfish

food poisoning, bacterial toxins

893

hepatitis A virus 2958

soft drinks, *Clostridium*, polymerase

chain reaction 819

soil, *Salmonella* 2776

spectrofluorometer

surface water

coliform bacteria 3137

faecal coliforms 3137

statistical analysis, beef, carcasses,

abattoirs, microbial contamina-

tion, Canada 2045

Techniques cont.

detection cont.

water

coliphages, Brazil 1119

Listeria innocua, viability, tem-

perature 2889

microorganisms, reviews 3190

pathogens, reviews 838

Salmonella 2776

water quality

coliform bacteria, methodology,

assessment 857

Escherichia coli, methodology,

assessment 857

water supply, poultry farming,

Campylobacter 3894

wells, water, viruses 2869

wood, stain fungi, enzyme activity

2105

determination

activated sludge, microbial flora, res-

piration, inhibition, patents 3197

algal blooms, algae, pigments,

absorption, characteristics 272

almonds, aflatoxins 1959

ATP, bioluminescence, poultry meat,

production, waste water, micro-

bial contamination 153

bacteria, survival 3868

bacterial count

biofilms, bacteria, isopropyl

cinodine, nalidixic acid,

effects 3907

biological filtration, aerobes 3908

water, bacteria, isopropyl

cinodine, nalidixic acid,

effects 3907

beverages, microbial contamination,

Nigeria 916

bioassays, bacteria, toxic substances,

waste water, activated carbon,

treatment 3198

blooms, formation, bacteria, pig-

ments, absorption, characteris-

tics 272

Brazil nuts, aflatoxins 1959

butter, microbial contamination, Paki-

stan 176

cheeses

bacteria, Spain 2088

moulds, Spain 2088

yeasts, Spain 2088

colorimetry, enzymes, beta-

galactosidase, sewage, faecal

coliforms 3194

comparisons

chemicals, biodegradation 1423

polymers, biodegradation, fungi

1542

denitrification

waste water

Paracoccus denitrificans,

bioreactors, cells, immo-

bilization 1627

Pseudomonas, bioreactors,

cells, immobilization

1627

DNA, activated sludge, biomass 1154

enhancement, biodegradation 2248

ergosterol

*Pinus sylvestris**Aspergillus versicolor*, bio-

mass 3004

Penicillium brevicompactum,

biomass 3004

flow cytometry, bacteria, water 1848

foods

Bacillus cereus, spores, germina-

tion 2837

microbial flora 1944

fresh water, enterovirus, bacteri-

ophages, models 2902

fumonisins, heat stability, maize 2930

GC/MS, volatile compounds, gases,

biological treatment, refuse

1153

gene probes

drinking water, *Escherichia coli*

824

poliovirus, drinking water 2903

Techniques cont.

determination cont.

gene probes cont.

polychlorinated biphenyls,

biodegradation, contaminated

soils, microorganisms 3577

groundnuts, aflatoxins 1959

ice, water quality, bacteria 2885

 β -lactams

antimicrobial properties

Enterobacteriaceae 1050

Pseudomonas 1050

maize

aflatoxins 1959

fumonisins, liquid chromatogra-

phy 78

metals, microbial corrosion, biocides,

effects 1022

methanogens, organochlorine com-

pounds, toxicity 3185

microelectrodes

sewage, biological treatment,

rotating biological con-

tactors, biofilms, dissolved

oxygen concentration 1394

waste water treatment, biofilms,

oxygen, concentration 1189

mushrooms, brine, *Clostridium**sporogenes*, spores, heat resis-

tance 2948

nitrification, sewage sludge 1781

nitrophenols, biodegradation, bacteria,

soil 1150

offal, vacuum packaging, microbial

contamination, Enterobacter-

iaceae 2037

organic compounds, biodegradation,

Sturm test, assessment 1854

phenols, biodegradation, mass spec-

trometry 603

phosphorus, removal, activated sludge

690

pistachios, aflatoxins 1959

plate count

bacteria, phosphates, solubiliza-

tion 818

fungi, phosphates, solubilization

818

meat, microbial contamination

132

polymerase chain reaction

aliphatic hydrocarbons,

biodegradation, *Methylosinus**trichosporium*, enzymes 796*Listeria monocytogenes* 2883

population genetics, biological activ-

ity in soil 825

quinones, biological filtration, aerobic

treatment, bacteria, populations,

environmental factors, effects

1281

rapid methods

fish, coliform bacteria 2012

foods, *Listeria monocytogenes*

1938

respirometry

benzene, biodegradation, kinetics

1514

waste water, characteristics,

bioreactors 1304

Salmonella enteritidis, heat tolerance

2878

sewage, treatment, bioreactors, anaer-

obes, redox potential 302

sewage sludge, *Salmonella* 2238

sprouts, storage, microbial activities,

amines, production 2011

stability

reference materials

microbiology

gram negative bacteria,

desiccation 3906

gram positive bacteria,

desiccation 3906

sulfides, oxidation, *Thiobacillus**thiooxidans* 2611

surfactants, biodegradation, sea water

2583

thin layer chromatography

milk, aflatoxins 173

Techniques cont.

determination cont.

thin layer chromatography cont.
nuts, contamination, mycotoxins 88

ultrasonic treatment, equipment, microbial contamination 205
water distribution, pipes, contamination, heterotrophic microorganisms, Finland 2893

yeasts, toxins, production 1963

differentiation

bread, spoilage, *Bacillus* 1981
cellulose, biodegradation, landfills, wastes, bacteria 3509

culture media

beef

modified atmosphere storage

Enterobacteriaceae 52

Pseudomonas 52

Salmonella 868

fatty acids, wines, spoilage, yeasts 1992

gene identification

Listeria innocua 2881

Listeria monocytogenes 2881

Listeria, physiology, motility, flagellin, production, temperature 2875

Penicillium, secondary metabolites 1936

dna amplification, foods, *Listeria monocytogenes*, random amplified polymorphic DNA 2882

DNA probes

polymerase chain reaction, comparison, enterovirus, sea water, Mediterranean sea 3891

Staphylococcus aureus, enterotoxins, gene location 50

DNA sequencing, *Desulfurella acetivorans*, taxonomy 3835

drinking water, microbial contamination, Chile 25

electrical treatment

foods

Escherichia coli, inactivation, temperature 874

Saccharomyces cerevisiae, inactivation, temperature 874

electron microscopy

Listeria monocytogenes, pressure, effects 3098

Salmonella thompson, pressure, effects 3098

electrophoresis, *Listeria monocytogenes*, epidemiology, Denmark 2842

enrichment

detection

Salmonella typhimurium

Escherichia coli, effects, immunoassay 3108

selenium, effects, immunoassay 3108

Thiothrix 262

enumeration

agar

evaluation, foods, spoilage, *Penicillium* 3130

hexachlorohexane, biodegradation, *Pseudomonas*, soil 3902

cheeses, *Enterococcus*, *Streptococcus* 2906

comparison

drinking water, sulfite reducing bacteria, *Clostridium* 2896

groundwater, sulfite reducing bacteria, *Clostridium* 2896

sewage effluent, sulfite reducing bacteria, *Clostridium* 2896

surface water, sulfite reducing bacteria, *Clostridium* 2896

comparisons

faecal flora, contamination, surface water, Barbados 1860

sludges, application to land, *Salmonella*, bacterial count 1907

crocodiles, farming, waste water, salmonellae, Zimbabwe 1815

Techniques cont.

enumeration cont.

culture media

foods, *Bacillus* 3100

seafoods, *Vibrio* 120

seawater, coliform bacteria 2845

2,4-dinitrophenol, biodegradation, activated sludge, bacteria 1537

dyes, surfaces, titanium, contamination, bacteria 3011

Escherichia coli 1106

foods

Escherichia coli 1941

Listeria monocytogenes 2913

fresh water

sediments

Escherichia coli 1905

Salmonella 1905

Gram positive bacteria 2787

identification, composts, bacteria, Canada 2296

lamb (meat), carcasses, microbial contamination, coliform bacteria 2056

meat, *Enterococcus*, *Streptococcus* 2906

milk, *Listeria monocytogenes*, mathematical models 2085

o-nitrophenol, coliform bacteria, foods, processed products 2850

poultry meat

quality

monitoring

Enterobacteriaceae 149

Escherichia coli 149

surfaces, *Escherichia coli* 1941

Thiobacillus ferrooxidans 816

water

Escherichia coli, culture media 21

faecal coliforms, culture media 21

estimation

activated sludge, respiration rate 2255

assays

fluorescence microscopy, biomass, *Desulfovibrio desulfuricans*, carbon 820

microbial activities, activated carbon 2782

biofilms

growth 1152

microbial activities 1217

carrageenan, bacteria 885

ELISA, fish, *Clostridium botulinum*, bacterial toxins 1951

enzymes, packaging, materials, biodegradation 3514

immunofluorescence

activated sludge, *Nocardia* 1317

anaerobic digestion, *Nocardia* 1317

methodology, surfactants, biodegradation 636

network analysis, activated sludge, chemical oxygen demand 1329

evaluation

biofilms, rotating biological contactors 444

biomass 1198

comparisons, activated sludge, plasmids 3312

crab meat, bacterial count 951

foods, microbial contamination, food safety 1903

gene expression, *Phanerochaete chrysosporium*, lignin peroxidase 3132

nitrite, production, *Flexibacter canadensis* 3728

plastics, biodegradation, microorganisms 606

respirometry, petroleum, biodegradation, soil 3562

scanning electron microscopy, liquid wastes, biological treatment, activated carbon+biomass, adhesion 2251

waste gases

biological filtration

ammonia 1271

butanol 1271

Techniques cont.

extraction

polycyclic hydrocarbons

biodegradation

microorganisms

bioremediation

soil

sorption 3490

transport processes 3490

flow cytometry

sewage, bacteria, isolation 3176

water, bacteria, isolation 3176

freezing, thawing, sewage sludge, pathogens, removal 291

growth analysis, foods, emulsions, pathogens 1880

hazard analysis critical control point, food safety, microbial contamination, control 1869

heat treatment, culture techniques, raw milk, *Bacillus*, recovery 158

identification

activated sludge, activation, foaming, *Nocardia* 1300

aldehydes, reduction, bacteria 3423

anaerobic digesters, *Propionibacterium* 432

aromatic hydrocarbons

biodegradation, *Sphingomonas* 3183

desulfurization, *Rhodococcus*, genes, genes, cloning 3570

Aspergillus niger, species 1937

bakery industry, effluents, microbial flora 697

chromatography, drinking water, *Aeromonas* 1911

computer techniques, *Penicillium* 2215

culture media

Chrysosporium 2873

drinking water

Escherichia coli 1916

Klebsiella oxytoca 1916

DNA amplification

Campylobacter coli 2186

Campylobacter jejuni 2186

Campylobacter lari 2186

Listeria monocytogenes 1078

DNA-DNA hybridization, sausages, *Leuconostoc* 981

DNA probes

Listeria monocytogenes, genes, listeriolysin, production, *Listeria* 2880

viruses, marine environment 235

electrophoresis, *Listeria monocytogenes*, genetics, phylogenetics 3114

enzyme immunoassay

Clostridium botulinum 1900

Neisseria 257

filters, membranes, errors, seawater, coliform bacteria 2844

fish, lactic acid bacteria 954

food industry

coliform bacteria 2851

Staphylococcus 2851

foods

enterococci 3905

fungi, reviews 2214

gel filtration chromatography, exopolymers, activated sludge 1856

grape must

Lactobacillus paracasei subsp. *paracasei*, Portugal 92

Leuconostoc oenos, Portugal 92

hplc, 3,4-dichloroaniline, biodegradation, polymers, production, *Phanerochaete chrysosporium* 3634

isolation

activated sludge, bacteria, filamentous, micromanipulation 1299

drinking water, denitrification, bacteria 2848

ketones, reduction, bacteria 3423

keys, *Vibrio* 2187

Techniques cont.

identification cont.

- Listeria ivanovi*, polymerase chain reaction, DNA probes 815
- Listeria monocytogenes* 2914
- mass spectrometry, microorganisms, books 2810
- microorganisms 822
- oligonucleotide probes, *Salmonella typhimurium* 852
- phosphorus, removal, activated sludge, bacteria 3743
- plasmid profiling, food poisoning, *Clostridium perfringens* 2772
- polyclonal antibodies
 - feeds, *Aspergillus ochraceus* 1888
 - foods, *Aspergillus ochraceus* 1888
- polymerase chain reaction
 - Aeromonas* 2188
 - anaerobic digesters, microbial flora 797
 - Clostridium perfringens*, classification, bacterial toxins, types, genes 2184
- food
 - Enterobacteriaceae 884
 - Listeria* 884
- food spoilage, *Zygosaccharomyces* 270
- Listeria* 2201
- Listeria monocytogenes* 2195
- poultry manure, *Salmonella*, serotypes 259
- poultry meat, *Salmonella*, serotypes 259
- probes, food contamination, *Salmonella* 2193
- pulsed field electrophoresis
 - foods, *Staphylococcus aureus*, enterotoxins, production 1898
 - Salmonella typhi*, strains 2212
- randomly amplified polymeric DNA fingerprinting, *Listeria monocytogenes*, serotypes 854
- rapid methods
 - foods, *Clostridium perfringens* 880
 - Salmonella* 49
- ribosomal RNA, dibenzo-p-dioxin, biodegradation, *Sphingomonas* 3425
- RNA probes
 - Enterococcus* 2847
 - Lactococcus* 2847
- meat
 - Carnobacterium* 128
 - Leuconostoc* 128
 - Streptococcus* 2847
- Salmonella*, food safety, reviews 2822
- Salmonella enteritidis*, strains, Germany 2211
- salted fish, proteinases, production, microorganisms, Egypt 113
- sewage, protozoa 1148
- sludges, anaerobic digesters, bacteria, methane 2353
- Thiothrix* 262
- Vibrio* 1087
- waste water treatment, aerobic treatment, bioreactors, bacteria 343
- water, enterococci 3905
- wines
 - corks, fungi, growth 1012
 - Lactobacillus paracasei* subsp. *paracasei*, Portugal 92
 - Leuconostoc oenos*, Portugal 92
- xylan
 - biodegradation
 - xylanase, *Bacillus stearothermophilus*, genes, identification 3901
 - β -xylosidase, *Bacillus stearothermophilus*, genes, identification 3901
- Yersinia kristensenii*, bacteriocin, *Yersinia enterocolitica*, isolates 853

Techniques cont.

- identification+statistical analysis, lamb (meat), contamination, Microcaceae 2054
- immobilization
 - activated sludge, phosphates, uptake, *Acinetobacter calcoaceticus* 3746
 - assessment, pyridine, biodegradation, *Pimelobacter* 1824
- immunoaffinity columns, foods, bacteria, removal 2203
- immunodetection
 - water
 - toxins
 - pathogens, reviews 3189
 - rotavirus, reviews 3189
- immunoenzyme techniques, determination, foods, *Listeria* 867
- immunological techniques
 - Campylobacter*, serotypes 246
 - recovery, beads, samples, environment, *Listeria* 1850
- immunology, methanogens, bioreactors 3859
- incubation, estimation, coliform bacteria 1849
- indentification, seafoods, vacuum packaging, lactic acid bacteria 954
- instrumentation
 - membranes, environmental degradation, bioremediation 3212
 - sensors, fibre optics, microbial mats, absorption coefficients 3181
- irradiation
 - foods, microbial contamination, pathogens, control, reviews 1036
 - poultry meat, *Campylobacter*, control 2072
- isoelectric focusing, *Listeria*, bacteriophages, proteins, nucleotide sequences 1103
- isolation
 - activated sludge, foaming, *Microthrix parvicella* 1114
 - beef
 - Escherichia coli* 2043
 - cytotoxin, production 59
 - carbofuran, biodegradation, soil, bacteria, phenotypic stability 1562
 - characterization
 - aniline, biodegradation, *Pseudomonas* 783
 - cellulose, biodegradation, *Clostridium hobsonii*, new species 2711
 - coffee pulp, caffeine, biodegradation, fungi 2415
 - chicken meat
 - contamination, *Listeria monocytogenes* 126
 - frozen meat, *Escherichia coli*, survival, growing media, comparisons 982
 - Pseudomonas*, Jamaica 992
 - 2-Chloroethylvinylether, biodegradation, *Ancylobacter aquaticus* 3503
 - comparisons
 - feeds, contamination, *Salmonella* 878
 - foods, contamination, *Salmonella* 878
 - Salmonella* 1891
 - culture media
 - animal manures, biodegradation, *Thermoactinomyces* 1825
 - composts, biodegradation, *Thermoactinomyces* 1825
 - drinking water
 - Escherichia coli* 1916
 - Klebsiella oxytoca* 1916
 - foods
 - Aeromonas* 869
 - Bacillus cereus* 1895
 - water activity, *Zygosaccharomyces rouxii* 882
 - hay, biodegradation, *Thermoactinomyces* 1825

Techniques cont.

isolation cont.

- culture media cont.
 - milk, contamination, *Campylobacter jejuni* 160
 - straw, biodegradation, *Thermoactinomyces* 1825
 - wood destroying fungi 2784
- culture techniques, DNA probes, foods, *Shigella* 1930
- detection, drinking water, biodegradation, bacteria, comparisons 855
- development, meat products, lipolytic bacteria 40
- drinking water, bacteria, β galactosidase, activity 1913
- feed of animal origin, contamination, *Salmonella*, Turkey 74
- fish, preservation, propionic acid, yeasts, resistance 936
- food handling, *Salmonella*, serotypes, laboratories, Italy 1085
- foods
 - Campylobacter* 33
 - Escherichia coli* 34
- identification
 - aromatic compounds, biodegradation, microorganisms 3406
 - seafoods, microbial contamination, *Aeromonas* 2965
- immunomagnetic separation, foods, *Escherichia coli* 2846
- lignocellulose
 - biodegradation
 - Aspergillus* 2488
 - Paecilomyces* 2488
 - Sporotrichum* 2488
- meat, *Listeria monocytogenes* 958
- meat products
 - contamination, *Listeria monocytogenes* 126
 - Escherichia coli* 34
- oysters, hepatitis A virus 948
- pigmeat
 - Escherichia coli* 1889
 - Yersinia enterocolitica* 975, 1889
 - Yersinia pseudotuberculosis* 1889
- polychlorinated biphenyls, biodegradation, microorganisms 3424
- poultry meat, *Campylobacter* 33
- prepared foods, *Yersinia enterocolitica* 975
- pulp and paper industry, pulps, mineralization, fungi 1697
- pulsed field electrophoresis, *Escherichia coli* 3119
- rivers
 - Escherichia coli* 1889
 - Yersinia enterocolitica* 1889
 - Yersinia pseudotuberculosis* 1889
 - Germany 1910
 - Japan 1910
- salted fish, proteinases, production, microorganisms, Egypt 113
- sausages, contamination, *Listeria monocytogenes* 126
- stainless steel, surfaces, biofilms, bacteria 1023
- sugarcane bagasse, utilization, *Celulomonas flavigena*, mutants 2481
- tetrachloroethane, biodegradation, gram negative bacteria 3504
- thermal springs, *Caldicellulosiruptor lactoaceticus*, new species, cellulolytic microorganisms 2724
- Thiobacillus ferrooxidans* 816
- Thiothrix* 262
- waste water, *Campylobacter* 3193
- water, contamination, *Legionella* 2855
- water systems, *Legionella* 210
- laboratory tests, cultures, metals, microbial corrosion, *Gallionella* 1902
- measurement
 - biomass, growth, bioreactors, pH, control 1181

Techniques cont.

- measurement cont.
 - biosensors, automation, activated sludge, respiration, inhibition 1146
- methodology, refuse, biodegradation, Italy 2243
- microbial activities, waste water treatment, anaerobic digesters, membranes, control 3343
- mineralization, activated sludge 3327
- nitrification, activated sludge 3327
- sardines, bacteria, histamine, production 117
- waste water treatment, biological fixed-film systems, biofilms, thickness 3355
- measurements, microscopy, biofilms, thickness 1178
- metals, bioremediation 3221
- methodology, plastics, biodegradability 1541
- monitoring
 - activated sludge, bacteria 2254
 - air conditioners, dust, Gram negative bacteria 3111
 - assessment, air pollution, indoor, air spora 3160
 - bacterial count, water distribution, pipes, bacteria, growth 2895
 - cellulosic wastes, biodegradation, methane production, anaerobic digesters, operation 3398
 - composting, air pollutants 3158
 - culture media, water distribution, pipes, contamination, heterotrophic microorganisms, Japan 2894
 - drinking water, bacteriophages, Israel 2898
 - ecosystems, environmental assessment 3200
 - fluorescence
 - denitrification, activated sludge, performance 684
 - nitrification, activated sludge, performance 684
 - foods, trichothecenes 1961
 - gas production, nitrification, waste water treatment, microorganisms, metabolism 3723
 - lactic acid, wines, spoilage, *Lactobacillus hilgardii* 93
 - mathematical models, estuaries, microbial contamination, faecal coliforms, USA 1137
- meat
 - Campylobacter coli*, reviews, USA 2818
 - Campylobacter jejuni*, reviews, USA 2818
 - Escherichia coli*, reviews, USA 2818
 - Listeria monocytogenes*, reviews, USA 2818
- microbial flora, indexes, activated sludge, bioreactors 301
- mussels, toxins, Adriatic Sea 2014
- phosphorus, release, activated sludge, electrical conductivity 3751
- poultry
 - Campylobacter coli*, reviews, USA 2818
 - Campylobacter jejuni*, reviews, USA 2818
 - Escherichia coli*, reviews, USA 2818
 - Listeria monocytogenes*, reviews, USA 2818
- probes, anaerobic digesters, failure 3178
- rivers
 - water
 - pathogens, survival 3148
 - viruses, survival 3148
- sewage
 - biological treatment, activated sludge, microbial activities 3180
 - toxicity, *Photobacterium phoreum* 1237

Techniques cont.

- monitoring cont.
- sewage cont.
 - treatment, aerosols, microorganisms, production 303
- sewerage, coliform bacteria, streptococcaceae 3175
- silage, *Listeria monocytogenes*, survival, oxygen 3810
- waste water, fermentation, molasses, methodology 1223
- waste water treatment
 - activated sludge
 - catalases, enzyme activity 1208
 - respiration rate, oxygen transfer 297
 - ponds, catalases, enzyme activity 1208
 - rivers, catalases, enzyme activity 1208
- mutagenicity, *Salmonella*, polluted water, organic compounds, toxicity 278
- neural networks, artificial, organic compounds, biodegradation, assessment 3419
- nuclear magnetic resonance spectroscopy, plastics, starch, biodegradation, enzymes 605
- nucleotide sequences, bacteriocins, production, *Lactobacillus sake* 3863
- organic compounds, bioremediation 3221
- photometry, naphthalene, biodegradation, *Pseudomonas fluorescens*, naphthalene dioxygenase 1855
- physical models, pipelines, biofilms, sulfate reducing bacteria, control, biocides 3028
- plate count
 - culture media, agar, foods, *Salmonella* 2870
 - luminescence, ATP, raw milk, bacterial count, comparisons 159
- Poland, aquifers, microbial contamination 859
- polychlorinated biphenyls, biodegradation, sediment, anaerobic conditions 3505
- polymerase chain reaction
 - seawater, viruses, detection 2857
 - sewage, viruses, detection 2857
 - Staphylococcus aureus*, detection 45
- polymerase chain reaction + restriction fragment length polymorphism, bacteria, genetic analysis 3900
- prediction, assays, beef, spoilage, cold storage 2975
- purification
 - aromatic compounds, biodegradation, *Phanerochaete chrysosporium*, enzymes 508
 - Aspergillus oryzae*, antioxidants, production 2760
- pyrene, tracer techniques, waste water treatment, activated sludge, retention 3331
- pyrolysis, mass spectrometry, *Carnobacterium*, characterization 2205
- quantification
 - immunofluorescence microscopy, chlorophenol, biodegradation, activated sludge, *Rhodococcus chlorophenolicus* 3576
- meat, raw, minced, microbial contamination 17
- recognition, microscopy, computer analysis, algorithms, water quality, algae 3186
- recovery
 - culture media
 - faecal coliforms
 - sewage 2872
 - water 2872
 - sea water, coastal areas, *Staphylococcus aureus* 3159
 - swimming pools, pathogens 2856
 - Escherichia coli*, selenium, effects 3108
 - estuaries, faecal coliforms, culture media, comparisons 18

Techniques cont.

- recovery cont.
- filters
 - efficiency, adenoviridae, water 3094
 - membrane, *Legionellae*, environment, samples 3122
- filtration, drinking water, *Cryptosporidium*, oocysts 1852
- foods, *Escherichia coli* 1933
- glass wool
 - water
 - enterovirus 2866
 - rotavirus 2866
- milk, *Listeria monocytogenes*, heat injury 1890
- Salmonella typhimurium*, selenium, effects 3108
- sampling
 - air microbiology, equipment, comparisons 2852
 - comparisons, air, contamination, endotoxins 3157
 - endotoxins, air 2919
 - enumeration, foods, pathogens, bacteria, reviews 2921
 - food industry, hygiene, control 1894
 - foods, microbial contamination, reviews 32
 - milk
 - microbial contamination 165
 - microbial flora 165
 - quality, water, microbiology 20
- screening
 - aromatic hydrocarbons, biodegradation, microorganisms 1847
 - bacterial count, poultry meat, irradiation 2994
 - drilling, emulsions, biodegradation, anaerobic treatment 3402
 - dyes, xylanolytic microorganisms 2783
 - volatile organic compounds, biodegradation, bacteria 3177
 - xylan, biodegradation, fungi, enzymes 814
- spectrometry, air microbiology, aerosols, samplers, calibration 3246
- standards, plastics, biodegradability 1541
- substrates, ions, carbon tetrachloride, biodegradation, anaerobic treatment 2460
- test procedure, lubricants, biodegradation, assessment 1485, 1546
- testing
 - cosmetics, preservatives 1020
 - food production, microbial contamination, health hazards 836
 - organic compounds, biodegradability, anaerobic conditions 3451
 - pharmaceutical products, preservatives 1020
 - surfaces, disinfectants, efficiency 1057
- ultraviolet radiation
 - kinetics
 - effluents, bacteriophages, inactivation 2242
 - waste water, bacteriophages, inactivation 2242
- ultraviolet spectroscopy, *Phanerochaete chrysosporium*, cytology 3898
- vegetables, irrigation, waste water, nematoda, occurrence 3372
- Teflon**, biomass, formation, drinking water 3019
- Temperature**
 - Aeromonas hydrophila*, growth, assessment, comparisons 2199
 - beef, *Clostridium perfringens*, growth 134
 - chickens, carcasses, *Staphylococcus aureus*, control 2070
 - Clostridium botulinum*, growth 3120
 - effects
 - faecal coliforms, dynamics, ponds, Morocco 3169
 - sporulation, culture media, food safety, *Bacillus cereus*, spores 2827

Temperature cont.effects *cont.**Vibrio cholerae*, dynamics, ponds, Morocco 3169eggs, washing, water, *Salmonella enteritidis*, control, USA 1096food, *Listeria monocytogenes*, control, mathematical models 245*Listeria monocytogenes*, heat tolerance, mathematical models 1932melons, storage, *Escherichia coli*, survival 2007

olive oil, production, waste water, anaerobic digestion, kinetics 1668

Phanerochaete chrysosporium, growth, soil, starch, peptone 1554

rice, stored products pests, fatty acids 81

Salmonella typhimurium

growth 1076

inhibition, lactoperoxidase 217

seafoods, *Vibrio cholerae*, survival 2018

seeds, fungi, aflatoxins, production, melons, Nigeria 898

stainless steel, *Listeria monocytogenes*, biofilms, control 2163surfaces, contamination, *Salmonella enteritidis*, survival 2854watermelons, storage, *Escherichia coli*, survival 2007*Yersinia enterocolitica*

growth, virulence, plasmids 254

physiology, virulence, plasmids 254

Temperature resistance*Bacillus cereus*, spores, relative humidity 1088*Vibrio fluvialis*, survival 1097*Vibrio mimicus*, survival 1097*Vibrio parahaemolyticus*, survival 1097**Termites**

control

waferboards, biodeterioration, disodium octaborate 191

wood, biodeterioration, creosote, fuel oils 188

resistance, *Pinus*, copper naphthenate 189**Tetrachlorobenzyltoluenes**, biodegradation,activated sludge, *Alcaligenes* 3472**Tetrachloroethane**

biodegradation

aquifers, microbial flora, fatty acids, effects 1453

Dehalospirillum multivorans, characterization 2745

gram negative bacteria, isolation 3504

Tetrachloroethene, biodegradation,*Desulfomonile tiedjei* 2412**Tetrachloroethylene**

biodegradation

aerobic conditions 3436

Dehalospirillum multivorans,

enzymes, properties 2454

groundwater, mathematical models, kinetics 2430

Pseudomonas 2420**Tetracycline***Escherichia coli*, resistance, milk products, contamination, Iran 2996

resistance, Gram negative bacteria, sediment, marine environment, Scandinavia 3043

Tetradecane, biodegradation, polluted soils,

bioremediation 530

Tetrahymena pyriformis, *Pseudomonas**fluorescens*, predation, bioreactors 1307**Textile industry**

dyes, decolorization, anaerobic digestion 1739

effluents, nitrogen, removal, biological treatment, design 1652

waste water

chemical treatment+biological treatment 3782

nitrification, biological fixed-film systems, inhibition 3739

waste water treatment

activated sludge

3-aminobenzenesulfonate,

biodegradation, filters, inoculation 1740

Textile industry cont.waste water treatment *cont.*activated sludge *cont.*

3-nitrobenzenesulfonate,

biodegradation, filters, inoculation 1740

wastewaters, nonionic surfactants,

biodegradation, *Candida maltosa* 3579**Thailand**bean sprouts, *Salmonella* 1979chicken meat, *Salmonella* 152poultry products, *Salmonella* 152starch, waste water, utilization, *Spirulina platensis*, production 1404*Thauera*, toluene, anaerobic conditions 2528*Thauera selenatis*

selenium

metabolism, biochemistry 3697

removal, drainage water, USA 3697

Thermal degradation, biomass, energy, production, Canada, European Union 2812**Thermal springs***Caldicellulosiruptor lactoaceticus*

new species

characterization, cellulolytic

microorganisms 2724

isolation, cellulolytic microorganisms 2724

Thermanoerobacter, hydrogen, oxidation, thiosulfates 660**Thermoactinomyces**

animal manures, biodegradation, isolation, culture media 1825

composts, biodegradation, isolation, culture media 1825

hay, biodegradation, isolation, culture media 1825

straw, biodegradation, isolation, culture media 1825

Thermoanaerobacter, hydrogen, oxidation, thiosulfate, reduction 3454*Thermoascus aurantiacus*, wheat straw, biodegradation, xylanase, characterization 2753*Thermoascus crustaceus*, xylanases, comparison 808**Thermomechanical pulping**, waste water, biological treatment, anaerobic conditions 3774*Thermomonospora curvata*, cellulase, production, sugarcane bagasse, biodegradation 716**Thermomonospora fusca**

wheat straw

biodegradation

endoglucanase, synthesis 1482

peroxidases, synthesis 1482

xylanase, synthesis 1482

xylanase, characterization, nucleotide sequences 3879

Thermomyces lanuginosus

lignocellulosic wastes, utilization,

enzymes, production 555

maize cobs, utilization, enzymes, production 555

Thermophilic bacteria, new species,

oilfields, France 3851

Thermophilic fungi, *Leptochloa fusca*,

straw, utilization, cellulase, production 2491

Thermophilic microorganisms

anaerobic treatment, sludges, biological treatment, Denmark 1774

beta-glucosidase, gene cloning, *Escherichia coli* 772

carbohydrates, fermentation, marine environment, USA 514

metabolism, sulfur, reduction, reviews 1802

proteins, fermentation, marine environment, USA 514

sewage sludge

aerobic digestion, UK 427

aerobic treatment 3262-3263

sulfates, oxidation, India 2610

Thermus scotoductus, new species, drinking water, Iceland 1080*Thielavia terrestris*, xylanases, comparison 808**Thiobacillus**

alkyl sulfides, biodegradation 3684

heavy metals, sewage sludge, bacterial leaching 643

sewage sludge

heavy metals, removal, bacterial leaching 640

sulfur, oxidation, sulfuric acid, production 661

thiosulfates, oxidation, sulfuric acid, production 661

sulfur

oxidation

bacterial leaching 1600

bioreactors, oxygen, effects 3689

Thiobacillus acidophilus, thiosulfate

dehydrogenase, characterization 2732

Thiobacillus denitrificans

oil refinery wastes, biological treatment 3541

sulfides, organic compounds, toxicity, removal, waste water, biological treatment 3430

Thiobacillus ferrooxidans

arsenic, oxidation, iron, pyrites, effects 2608

arsenopyrite, oxidation 3793

biogas, desulfurization, bioreactors 1595

coal, desulfurization 470, 2673, 3799

copper

mine tailings, bacterial leaching, Canada, lipopolysaccharides 2672

rocks, bacterial leaching 747

enumeration 816

ferrous sulfate

oxidation

bioreactors, efficiency 2607

reviews 2604

heat shock, cold shock 2734

immobilization, iron, oxidation,

polymers, matrices 3843

iron

ore, bacterial leaching, silver, ultraviolet radiation, effects 2591

oxidation

arsenic, resistance, genetics engineering, plasmids 3854

kinetics 638

isolation 816

lead, sulfides, oxidation 3686

minerals, arsenopyrite, oxidation, arsenic, production 2613

molybdenum, bacterial leaching, surfactants 1753

nickel sulfide, oxidation 2712

plasmids, replication origin, characterization 3858

pyrites

adhesion 3794-3795

oxidation 2602

cobalt, separation 1754

sphalerite, oxidation, comparisons 3688

sulfides, ores, bacterial leaching 744

sulfur

adhesion 3795

removal

natural gas 3547

petroleum oil 3547

zinc, rocks, bacterial leaching 747

Thiobacillus neapolitanus, control, biological competition, microbial corrosion,

sewage, concrete 1024

Thiobacillus thiooxidans

control, biological competition, microbial corrosion, sewerage, concrete 1024

copper, rocks, bacterial leaching 747

lead, sulfides, oxidation 3686

pyrites, oxidation, cobalt, separation 1754

sphalerite, oxidation, comparisons 3688

sulfates, production, hydrogen sulfide, biodegradation 650

sulfides

ores, bacterial leaching 744

oxidation, determination 2611

sulfur, production, hydrogen sulfide, biodegradation 650

thiosulfate, oxidation, characterization 1599

zinc, rocks, bacterial leaching 747

Thiocyanates, biodegradation, *Acinetobacter johnsonii*, *Pseudomonas diminuta* 667

Thiophene, biodegradation, *Pseudomonas* 1496

Thiosphaera pantotropha
denitrification, activated sludge, aerobic conditions 3722
methanol, biodegradation, genetics 3635
transfer, *Paracoccus denitrificans*, Gram negative bacteria 1812

Thiosulfate, oxidation, characterization, *Thiobacillus thiooxidans* 1599

Thiosulfates
hydrogen, oxidation, *Thermanoerobacter* 660
oxidation, sewage sludge, *Thiobacillus*, sulfuric acid, production 661

Thiosulfite, reduction, hydrogen, oxidation, *Thermanoerobacter* 3454

Thiothrix
enrichment 262
growth, physiology, activated sludge 1318
heavy metals, sorption 2585
identification 262
isolation 262

Thiopus arrhizus, sorption, ion exchange, cations, chemical properties 3669

Thiampi caeruleus
cadmium, polluted soils, bioremediation 1164
zinc, polluted soils, bioremediation 1164

Tiles, ceilings, fungi, growth 3025

Tillage
herbicides
biodegradation
soil
bacteria 611
fungi 611
insecticides
biodegradation
soil
bacteria 611
fungi 611

Timbers
biodeterioration
Limnoria placauda, India 190
mushroom houses
bacteria, Poland 3002
wood destroying fungi, Poland 3002
wood preservatives, efficiency 3003
decay
Gloeophyllum sepiarium
control
Aspergillus niger 185
Penicillium 185
Trichoderma viride 185
Pleurotus ostreatus
control
Aspergillus niger 185
Penicillium 185
Trichoderma viride 185

Titanium dioxide
effects, irradiation, *Pseudomonas stutzeri*, survival 2139
water, *Escherichia coli* 2161

Tobacco, wastes, biodegradation, methane production, anaerobic digestion 3393

Toluene
biodegradation
aerobic conditions, *Pseudomonas maltophilia* 3554
biofilms, biological fixed-film systems, denitrification 1507
denitrification, anaerobes 3573
denitrifying bacteria, kinetics 2521
Desulfobacula toluolica
biochemistry 2508
taxonomy 2508
groundwater, Australia 3222
interactions
microorganisms 572
Pseudomonas 572
microbial flora, soil, concentration, effects 3559
Mycobacterium vaccae, soil, metabolites, toxicity 574

Toluene cont.
biodegradation cont.
Pseudomonas
anaerobic conditions, genetic engineering 3438
enzyme activity, gene amplification 2505
Pseudomonas putida 3470
enzymes, characterization 3552
gene mapping 3549
genetics 773
surface proteins, identification 2708
soil, microorganisms, nutrients, effects 575
sulfate reducing bacteria, iron, enhancement, anaerobic conditions, USA 3542
removal
gases, biological filtration, mathematical models 2503
groundwater, biological treatment, bioreactors, fluidized beds 2527
Thauera, anaerobic conditions 2528
transformation, toluene glycol, production, *Pseudomonas putida*, growth, bioreactors 1411
xylene, mixtures, biodegradation, benzene, *Pseudomonas putida*, genetic engineering 2504

Toluene diamine, biodegradation, activated sludge, Japan 2437

Toluene glycol, production, toluene, transformation, *Pseudomonas putida*, growth, bioreactors 1411

4-Toluene sulfonate, biodegradation, *Comamonas testosteroni* 520

Toluene+xylene, biodegradation, denitrifying bacteria 2520

Toluic acid, biodegradation, *Pseudomonas putida* 3470

Tomato juice
contamination
Aspergillus, growth, models 94
Clostridium sporogenes, growth, models 94
food preservatives
bacterial count 98
keeping quality 98

Tomato pomace
hydrolysis
Sporotrichum
feeds, production 462
proteins, production 462
Trichoderma longibrachiatum
feeds, production 462
proteins, production 462

Tomatoes
moulds, control, garlic, extracts, antifungal properties 2169
processing
wastes
anaerobic digestion
methane production 490
microorganisms, characterization 698
pulp, quality, lactic acid bacteria, organoleptic traits 102

Tombs, biodeterioration, microorganisms, control, Egypt 193

Toxic chemicals, biodegradation, environment, aerobic conditions, techniques, assessment 3412

Toxic substances
biodegradation
activated sludge, bioreactors, computers, control 1538
aquatic environment, bioremediation 314
books 2813
sewage sludge, anaerobic digestion 524
bioremediation, books 2813
effects, activated sludge, operation, assessment 2329
environment, bioremediation, USA 310
groundwater, contamination, bioremediation, Germany 313
inhibition, anaerobes, forest industry, waste water, biological treatment 1714

Toxic substances cont.
nitrification, inhibition, sewage, biological treatment, Denmark 1629
pollution, bioremediation, books 2796
waste treatment, reviews 1661
waste water, activated carbon, treatment, determination, bioassays, bacteria 3198

Toxicity
sewage, biological treatment, anaerobes 3814
waste water, biological treatment, anaerobes 3814

Toxinogenic fungi, foods, storage, Nigeria 269

Toxins
Bacillus cereus, reviews 1953
bacterial toxins, verotoxins, production, beef, *Escherichia coli* 1949
Clostridium botulinum
genetics 1956
nucleotide sequences 1957
dinoflagellates, mussels, contamination 943
Escherichia coli, detection, DNA probes 60
hepatotoxins
microcystins, production, cyanobacteria, fresh water, Canada, bioassays 3095
release, *Microcystis aeruginosa*, algal blooms, treatment, copper sulfate + calcium hydroxide 3149
microcystins, persistence, *Microcystis aeruginosa*, crusts, lakes, shores 3117
mussels, monitoring, Adriatic Sea 2014
mycrocystin, cyanobacteria, drinking water, treatment 2901
neurotoxins, production, *Clostridium botulinum*, detection, polymerase chain reaction 2922
pathogens, water, immunodetection, reviews 3189
production
Alexandrium
marine environment
Canada, biogeography 2222
USA, biogeography 2222
algae, reviews 3133
control, crumpets, *Bacillus cereus*, nisin 2155
cyanobacteria, decomposition, chemicals, chemical analysis 891
foods, *Aeromonas* 2917
inhibition, *Clostridium botulinum*, sodium lactate 1091
Listeria monocytogenes
cysteine + potassium sorbate 1954
organic compounds 2916
meat, contamination, *Escherichia coli*, detection, DNA probes, USA 2918
meat products, *Clostridium botulinum*, survival, vacuum packaging, storage, temperature 1922
Microcystis aeruginosa, drinking water, removal, activated carbon 1741
pasta, *Clostridium botulinum*, survival, vacuum packaging, storage, temperature 1922
potatoes, sulfite, treatment, *Clostridium botulinum*, vacuum packaging 2008
seafoods, contamination, *Escherichia coli*, detection, DNA probes, USA 2918
yeasts, determination 1963
rotavirus, water, immunodetection, reviews 3189
shellfish
detection, liquid chromatography 2955
food poisoning, detection, enzyme immunoassay 2027

Toxocara canis, removal, sewage sludge, anaerobic digestion 289

Trace metals, mobilization, soil, bacteria, polymers 3677

- Trametes sanguinea**, lignin, biodegradation, laccase, purification 3529
- Trametes versicolor**, pulp mill effluent, decolorization 2661
- Trametes versicolor**
cultures, polychlorinated biphenyls, biodegradation 602
Kraft mill effluent, biodegradation 1731
laccase, isoenzymes, kraft mill effluent, lignin, biodegradation 3520
lignin, polymerization, plastics, production 1465
manganese peroxidase, production, sulfite pulping, wastes, delignification 3778
pulp mill effluent, decolorization 1701
sulfite pulping
wastes
 bioleaching 3779
 delignification 3779
- Transport processes**
Bacillus licheniformis, porous media 788
bacteria, porous media, models 789
polycyclic hydrocarbons, biodegradation, microorganisms, bioremediation, soil, extraction 3490
- Treatment**, comparison, waste water, discharge, regulations, USA 329
- Tri-*n*-butyltin**, biodegradation, marine sediments, Japan 613
- Triacylglycerol lipase**, production, HCH, biodegradation, *Pseudomonas* 3622
- Triacylglycerols**
biodegradation
 Aspergillus 2558
 Cladosporium 2558
 Fusarium 2558
 Penicillium 2558
 Trichoderma 2558
- 1,3,5-Triaza-1,3,5-trinitrocyclohexane**, biodegradation, *Clostridium bifermentans* 1590
- Triazines**, utilization, *Klebsiella pneumoniae* 2416
- Tribolium castaneum**, control, gamma radiation, grain legumes 2144
- 2,4,6-Tribromophenol**, biodegradation, bacteria, sediment, marine environment 3594
- Tributyltin**
sorption
 Chlorella emersonii 612
 Plectonema boryanum 612
 Synechocystis 612
- Tributyltin chloride**
biodegradation, *Pavlova lutheri* 665
Pavlova lutheri, growth 665
- Tributyltin oxide**, fish farms, biofouling, control, Malaysia 3041
- 1,1,1-Trichloroethane**, biodegradation, groundwater, bioremediation 498
- Trichloroethene**, biodegradation, bacteria, reviews 3483
- Trichloroethylene**
biodegradation
 aerobes, cultures techniques, enrichment 2400
 aerobic conditions 3436
 Alcaligenes eutrophus
 bioreactors 3474
 genetic engineering 3429
 Escherichia coli, genetic engineering 1441, 2406
 methanotrophic microorganisms, polyhydroxybutyrate 2449
 Methylocystis
 immobilization 3444
 materials, comparisons 564
 Methylomonas methanica, methane monooxygenase, synthesis 3487
 Methylosinus trichosporium
 bioreactors, models 3565
 Pseudomonas putida, oxygenases, activity 3446
 microbial flora, soil, concentration, effects 3559
 Mycobacterium 2719
 Mycobacterium vaccae, soil, metabolites, toxicity 574
- Trichloroethylene cont.**
biodegradation cont.
 Nitrosomonas europaea, enzymes, kinetics, mathematical models 2456
 Pseudomonas cepacia, bioreactors, mathematical models 3475
 Pseudomonas putida, genetic engineering 2406
 contamination, groundwater, bioremediation, *Methylosinus trichosporium* 3223
 groundwater, pollution, bioremediation, nitrogen, phosphorus, USA 2263
 polluted water, bioreactors 3463
 removal, groundwater, treatment, bioreactors 2426
- Trichloroguaiacols**, removal, pulp mill effluent, biological treatment, bioreactors, fluidized beds 1734
- 2,4,6-Trichlorophenol**
biodegradation
 anaerobes, pH 2546
 anaerobic digestion, Eubacteriales 604
- Trichlorophenol**
biodegradation
 Phanerochaete chrysosporium
 mycelium 3584
 proteins 3584
- 2,4,6-Trichlorophenol**, removal, pulp mill effluent, biological treatment, bioreactors, fluidized beds 1734
- 2,4,5-Trichlorophenoxyacetic acid**, biodegradation, *Phanerochaete chrysosporium* 3598
- Trichoderma**
antifungal agents, production, wood destroying fungi, control 2104
medium chain fatty acids, biodegradation 2558
triacylglycerols, biodegradation 2558
wood, biodeterioration, *Serpula lacrimans*, control 213
wood destroying fungi, antagonism 2103
- Trichoderma koningii**
cellulose
 biodegradation, enzymes, synergism 1460
 hydrolysis, enzymes, genetics 547
- Trichoderma longibrachiatum**
cellobiohydrolase 2765
cellulases, ultrastructure 804
cellulose, biodegradation, enzymes 552
galactoglucomannans, biodegradation, enzymes 538
genetic engineering, β -glucosidase 810
kraft pulp, bleaching, cellulases 729
oligosaccharides, hydrolysis, cellobiohydrolases, models 548
refuse, biodegradation, cellulase, activity 2768
rice straw
 biodegradation 1464
 ethanol production 2388
sugarcane bagasse, fermentation, cellulase, production 3510
tomato pomace
 hydrolysis
 feeds, production 462
 proteins, production 462
- Trichoderma reesei** (see *Trichoderma longibrachiatum*)
cellulose
 biodegradation
 cellulases 545
 xylanase, production 535
 enzymes, cellulase, production, detection, SDS-PAGE 1785
 galactoglucomannans, biodegradation, mannanases 533
 xylan, biodegradation, xylanase, production 535
- Trichoderma reesei + Saccharomyces cerevisiae**, plant residues, biodegradation, ethanol production 2384
- Trichoderma reesei+Pleurotus sajor-caju**, rice straw, biodegradation 2496
- Trichoderma viride**
apple pomace
 utilization
 cellulase, production 2487
 xylanase, production 2487
cellulase, properties, cellulose, biodegradation 1475
cellulose, biodegradation 3539
enzymes, apples, cellulose, biodegradation, xyloglucans, effects 2951
rice straw, biodegradation 1464
timbers
 decay
 Gloeophyllum sepiarium, control 185
 Pleurotus ostreatus, control 185
- Tricholoma lobayense**, soyabeans, wastes, biomass production 2373
- Trichosporon beigeli**, diphenyl ether, biodegradation 2413
- Trichosporon cutaneum**, aromatic compounds, biodegradation 571
- Trichosporon penicillatum**
phenanthrene, biodegradation, marine sediments, USA 2510
polycyclic hydrocarbons, biodegradation, marine sediments, USA 2510
- Trifluoroacetate**, biodegradation, soil, aerobes 3448
- Trifluoromethylbenzoate**, biodegradation, aerobes 2451
- Triglochin procerum**, comparisons, lagoons, wetlands, constructed, Australia 1341
- Trimethylamine**, effects, denitrification, activated sludge 3314
- 1,3,5-Trimethylbenzene**, biodegradation, groundwater, Australia 3222
- Trinidad and Tobago**
pigs
 carcasses
 Campylobacter 2051
 Listeria monocytogenes 2051
 Yersinia enterocolitica 2051
- Trinitrobenzene**, biodegradation, *Pseudomonas* 523
- 2,4,6-Trinitrotoluene**
biodegradation
 aerobes, cometabolism, molasses 1500
 Clostridium bifermentans 1590
- Trinitrotoluene**
biodegradation
 Desulfovibrio 567
 Phanerochaete chrysosporium, growth, bacteria, soil, antagonism 1429
 Pseudomonas, polluted soils 527
 soil, pollution, bioremediation, anaerobic conditions, USA 2269
- Trisodium phosphate**
pathogens, control, beef, microbial contamination 2149
poultry, carcasses, *Campylobacter*, control 994
washing, poultry, carcasses, microbial contamination, *Campylobacter*, control 2986
- Tropics**
nutrients, recycling, bacteria, mangrove swamps 1610
sewage effluent, suspended solids, removal, biological filtration 3306
wheat, water content, spoilage, moulds 1976
- Tuna**
canning
 quality
 histamine 941
 microbial contamination 941
- Turkey**
aldicarb, biodegradation, soil bacteria 2571
feed of animal origin, contamination, *Salmonella*, techniques, isolation 74
foodborne diseases, *Salmonella enteritidis*, isolation, techniques, identification, plasmids 14
sewage
 biological treatment, fluidized beds, mathematical models 2282

Turkey cont.

sewage cont.

- holiday accommodation, biological treatment, activated sludge 769
- hotels, biological treatment, activated sludge 769
- waste water, biological treatment, fluidized beds, mathematical models 2282

Turkey meat

- additives, *Listeria monocytogenes*, inhibition 1000
- Clostridium botulinum*, control, carboxylic acids 996
- contamination, *Clostridium botulinum*, control, organic salts 2991
- Listeria monocytogenes*, survival, modified atmosphere storage 2073
- vacuum packaging, microbial contamination, *Clostridium perfringens*, temperature, effects 998

Turkeys

feathers

removal

- microbial contamination
- pathogens 2075
- Salmonella*, processes, comparison 2076

- skin, contamination, *Listeria monocytogenes*, control, nisin 233

Typha lotifolia, pulp mill effluent, biological treatment 1357**Typhoid**, vegetables, irrigation, waste water, Chile 3371**Tyramine**

- production, sausages, *Lactobacillus*, pH 1086
- synthesis
- fish
- vacuum packaging
- carnobacterium*, keeping quality 953
- Lactobacillus*, keeping quality 953

Tyromyces palustris, resistance, preservative treated wood 192**Tyrophagus longior**, control, stored products

- pests, acaricidal plants, essential oils 3079

Tyrophagus putrescentiae, control, ham,

- contamination 972

UK

- Florida, nitrogen, removal, waste water treatment, biological filtration, methanol, addition 3727
- Jersey, sewage effluent, disinfection, ultraviolet radiation 225
- activated sludge, bulking, control, mathematical models 2328
- cattle slurry, composting, reviews 1256
- drinking water
- biological filtration
- ammonia, removal 742
- iron, removal 742
- manganese, removal 742
- feeds, microbial contamination, reviews 1967
- ice cream, microbial contamination, surveys 2839
- nitrification
- sewage
- activated sludge, foaming 3328
- treatment, biological filtration 380
- Northern Ireland
- chicken meat
- contamination
- Campylobacter coli* 995
- Campylobacter jejuni* 995
- nutrients, removal, waste water, biological treatment, comparison 3703
- pathogens, removal, sewage, biological filtration 380
- phosphorus, removal, activated sludge 670
- prepared foods
- salads
- microbial contamination 99
- yeasts 99
- sausages, spoilage, *Brochothrix thermosphacta*, detection, antibodies 2058

UK cont.

sewage

- biological filtration, artificial wetlands 1374
- treatment, upgrading, biological filtration 449
- sewage sludge
- aerobic digestion, thermophilic microorganisms 427
- composting, land reclamation 368
- disposal to land, management 452
- sewerage, surfactants, biodegradation 3649
- sludges, disposal to land, management 452
- stonework, biodeterioration, bacteria, control, biocides 3013
- surfactants, rivers, biodegradation, bacteria, mathematical models 3646
- waste water, denitrification, operation 675
- wastes, composting, reviews 2291
- wood preservatives, product development 1015

Ukraine, milk pipelines, materials, microbial contamination 2083**Ultraviolet irradiation**

water

- bacteriophages, inactivation 3069
- viruses, inactivation 3069

Ultraviolet radiation

disinfection

- drinking water 3070
- Bacillus pumilus*, control 2159
- sewage 1142
- waste water 1142
- drinking water
- disinfection, *Bacillus subtilis*, control 3072
- pipes, disinfection 226
- effluents, disinfection, *Escherichia coli*, recovery 3044
- Legionella pneumophila*, control, water distribution, pipelines, hospitals 3036
- Listeria*, control, food, environmental factors, effects 1871
- pretreatment, simazine, oxidation, products, biodegradation 2575
- sewage effluent
- disinfection
- bacteria, control, USA 2693
- UK 225
- viruses, control, USA 2694
- waste water, disinfection, faecal coliforms, inactivation 3075
- water, hepatitis A virus, removal 3068

Undecylbenzenesulfonate, biodegradation, bacteria, methane 3431**United Arab Emirates**

- air spora, filters, air conditioners 1026
- food, *Listeria* 2189
- marine environment, coastal areas, microbial contamination 1138

Uranium

- binding, *Pseudomonas fluorescens* 3658
- uptake, *Pseudomonas* 480
- water, sorption, *Talaromyces emersonii* 2593

Urban areas, waste water treatment, application to land, China 2364**Urea**

- nitrification, in vitro, fungi + yeasts 3721
- removal, *Escherichia coli*, encapsulation 2743

Uronic acids, biodegradation, *Erwinia carotovora*, pectate lyase 1458**USA**

- California
- selenium
- polluted soils, bioremediation, vegetation, management 3695
- removal, drainage water, *Thauera selenatis* 3697

USA cont.

Louisiana

atrazine

- biodegradation
- wetlands
- sediment

- aerobic conditions

- 2649

- anaerobic conditions

- 2648

Massachusetts, groundwater, nitrates, removal, bacteria 3719

Missouri, pollution, trinitrotoluene, soil, bioremediation, anaerobic conditions 2269

New Jersey, marine environment, contamination, sewage disposal, dumping, *Clostridium perfringens*, indicator species 3360

Utah, waste water, biological treatment, filters, biofilms, control 2311

Washington

- carbon tetrachloride, biodegradation, microorganisms, experimental design 511

- meat, contamination, *Escherichia coli*, toxins, production, detection, DNA probes 2918

- seafoods, contamination, *Escherichia coli*, toxins, production, detection, DNA probes 2918

Alaska

- diesel oil, polluted soils, bioremediation 316

- fish scrap, waste disposal, marine environment, microbial contamination 1397

fuel oils

- biodegradation, microorganisms, fertilizers 3544

- oil spills, bioremediation, bioventing 3240

- oil spills, Exxon Valdez, bioremediation 559

- petroleum hydrocarbons, biodegradation, sediment, bacteria 559

Arizona

- nitrification, denitrification, activated sludge, aerobic treatment, anaerobic treatment 1653

- sewage sludge + refuse, composting 373

California

- aromatic hydrocarbons, biodegradation, aquifers, bioremediation 562

- diesel oil, biodegradation, slow release fertilizers, polluted soils 318

landfills

- ammonia, emission, control, biological filtration 2404

- volatile organic compounds, emission, control, biological filtration 2404

- plant residues, composting 1247

- refuse, biological treatment, anaerobic digesters, biogas, production 3353

sewage

- biological treatment, marshes 420

- waste water treatment, artificial wetlands 1369

- sewage sludge, composting 1247

Colorado

- salads, potatoes, food poisoning, *Clostridium botulinum* 2947

- wastes, composting, reviews 3287

Connecticut, food processing, waste water, biological treatment, wetlands 1670

Florida

- composts, standards, development 1245

- domestic gardens, plant residues, composting 3283

- nitrogen, removal, waste water treatment, biological filtration, methanol, addition 3727

- USA cont.**
 Georgia
 food wastes, composting, economics 366
 plant residues, composting, economics 366
 wood residues, composting, economics 366
 Illinois
 food wastes, utilization, feeds 1405
 pollution control, aquatic plants, wetlands, constructed 1347
 waste paper, utilization, feeds 1405
 Kentucky, waste water, biological treatment, wetlands, constructed 1352
 Louisiana
 pollution, chlorinated hydrocarbons, soil, bioremediation 2265
 Vibrio vulnificus, control, bacteriophages, estuaries 2177
 Maine, scallops, toxins, variation 2959
 Maryland, shellfish, production, marine areas, water quality 1130
 Massachusetts
 aquifers, pollution, bioremediation, *Pseudomonas* 1162
 composts, sewage sludge, pathogens, growth 3172
 estuaries, microbial contamination, faecal coliforms, techniques, monitoring, mathematical models 1137
 phenanthrene
 biodegradation
 marine sediments
 Trichosporon penicillatum 2510
 yeasts 2510
 polycyclic hydrocarbons
 biodegradation
 marine sediments
 Trichosporon penicillatum 2510
 yeasts 2510
 sewage sludge, composting 375
 Michigan
 chlorinated hydrocarbons, biodegradation, anaerobic conditions, aquifers 2506
 grass clippings, composting 3284
 Minnesota
 composting 3289
 heavy metals
 removal
 acid mine drainage
 aerobic treatment, wetlands 1358
 anaerobic treatment, wetlands 1358
 wastes, composting 3286
 New England, industrial sites, pollution, bioremediation 317
 New Hampshire, foods, wastes, composting, economic analysis 3278
 New Jersey, sewage sludge, composting 374, 2304
 New Mexico, alkanes, biodegradation, oilfields, water, mathematical models, microorganisms, kinetics 3768
 New York, colleges, food wastes, domestic gardens, wastes, composting 362
 North Carolina
 nutrients, removal, *Phragmites australis*, wetlands, constructed 1349
 poultry, wastes, anaerobic digestion, research, reviews 756
 sewage sludge, composting, odour abatement 377
 Oregon
 explosives, sediment, bioremediation, composting 2617
 methane production, dairy effluent, anaerobic digestion 1387
 sewage sludge, composting, efficiency 2303
- USA cont.**
 Pennsylvania
 eggs
 washing
 water
 Salmonella enteritidis
 control
 pH 1096
 temperature 1096
 Texas
 algal blooms, *Aureococcus anophagefferens*, nitrogen, effects 3152
 correctional institutions, compost, production, sewage, domestic gardens, plant residues 360
 groundwater, microbial contamination 860
 refuse, composting 365
 septic tank effluent, treatment, biological filtration, wood chips 383
 sewage sludge, plant residues, composts, production, marketing 1253
 Utah
 brine, biological treatment, bioreactors, halophilic bacteria 2278
 phenols, biodegradation, waste water, saline water, oilfields, biological treatment, bioreactors, bacteria, halophiles 1694
 Vermont, wastes, composting 3298
 Virginia
 lakes, *Aeromonas*, seasonal variation 276
 sewage, treatment, onsite, aerobic conditions 3266
 sewage sludge, composts, marketing 1236
 Washington
 Anabaena flos-squae, lakes, seasonal variation 2224
 food poisoning, *Escherichia coli* 845
 foods, wastes, composting 3290
 sashimi
 contamination
 anisakidae 940
 Bacillus cereus 940
 Staphylococcus aureus 940
 sushi
 contamination
 anisakidae 940
 Bacillus cereus 940
 Staphylococcus aureus 940
 Washington State
 food wastes, composting 1234
 watersheds, contamination, *Giardia* 3144
 West Virginia, solid wastes, composting 1241
 Wisconsin
 cabbages, storage decay, *Phytophthora porri* 111
 hepatitis A virus, biological control, bacteria, isolation, animal manures 3083
 abattoirs, beef, meat hygiene 10
 algae, removal, lagoons, waste water treatment, filters, sand, design 447
 animal wastes, composting 1235, 1251
 aromatic compounds, biodegradation, harbours, sediment 1161
 biogeography, *Alexandrium*, toxins, production, marine environment 2222
 biological filtration, upgrading 382
 bioremediation, books 2811
 California, hydrocarbons, polluted soils, bioremediation, methodology 320
 cellulosic wastes, biodegradation, ethanol production 2498
 composting, design 1248
 domestic gardens, wastes, composting, estimation 1481
 drainage water, selenium, removal, ponds, algae + bacteria 3694
 fast food restaurants, waste paper, composting 3297
 feeds, maize, contamination, fumonisins, reviews 896
- USA cont.**
 Florida, nutrient removal, waste water, biological treatment, wetlands 1361
 food service, organic wastes, composting 3299
 food wastes
 agricultural wastes, composting, evaluation 361
 composting 359, 1251
 foodborne diseases
 Campylobacter, epidemiology 3101
 Clostridium botulinum, reviews 2817
 food handlers, pathogens, reviews 2831
 food hygiene, pathogens, reviews 2831
 foods
 Campylobacter jejuni 2816
 Escherichia coli 2816
 Listeria monocytogenes 2816
 maize, contamination, fumonisins, reviews 896
 Salmonella, detection, immunodiffusion tests 1934
 groundwater, microbial contamination, farms 2230
 harbours, sea water, microbial contamination, *Vibrio cholerae*, health risk 3031
 heavy metals, removal, polluted soils, bioremediation 1166
 hydrogen sulfide, oxidation, oilfields, *Thiobacillus denitrificans* 3838
 manures, composting 1235
 mayonnaise, *Escherichia coli*, survival 183
 meat
 Campylobacter coli, monitoring, reviews 2818
 Campylobacter jejuni, monitoring, reviews 2818
 Escherichia coli, monitoring, reviews 2818
 Listeria monocytogenes, monitoring, reviews 2818
 Salmonella, detection, immunodiffusion tests 1934
 nutrients
 removal
 sewage, bioreactors, aerobic treatment, anaerobic treatment 2627
 waste water, bioreactors, aerobic treatment, anaerobic treatment 2627
 organic compounds
 biodegradation, soil, soil flora 506
 removal, polluted soils, bioremediation 1166
 plant residues, composting 1250
 polluted soils, bioremediation, technology 326
 pollution, trichloroethylene, groundwater, bioremediation, nitrogen, phosphorus 2263
 polychlorinated biphenyls, biodegradation, rivers, sediment, microorganisms 2463
 poultry
 Campylobacter coli, monitoring, reviews 2818
 Campylobacter jejuni, monitoring, reviews 2818
 Escherichia coli, monitoring, reviews 2818
 Listeria monocytogenes, monitoring, reviews 2818
 poultry meat, *Campylobacter*, assessment, nucleic acids, hybridization 871
 refuse
 composting 2305
 waste disposal 3815
 sausages, *Listeria* 145
 sewage, biological treatment, wetlands, constructed 1365
 sewage effluent
 disinfection
 ultraviolet radiation
 bacteria, control 2693
 viruses, control 2694

USA cont.

- sewage sludge
 - composting 2292
 - reviews 1244
- disposal to land, management 452
- shrimps, microbial contamination, reviews 939
- sludges, disposal to land, management 452
- sugarcane, washing, waste water, biological treatment, anaerobic digestion 712
- toluene, biodegradation, sulfate reducing bacteria, iron, enhancement, anaerobic conditions 3542
- toxic substances, environment, bioremediation 310
- waste paper, composting 1251
- waste water
 - denitrification, operation 675
 - discharge, regulations, treatment, comparison 329
- waste water treatment
 - artificial wetlands, oxygen, transfer 3336
 - organic compounds, emission, control, reviews 1171
- wastes
 - composting, books 2807
 - management, legislation 2236

USSR, aromatic compounds, biodegradation, microorganisms, reviews 2440**Ustilago sphaerogena, maleic acid, biodegradation, D-maleic acid, production 1413****Vacuum packaging**

- beef
 - Aeromonas hydrophila*, growth 960
 - bacteria, amines, production 969
 - bacterial count 965
 - Listeria monocytogenes*, growth 960, 2974
 - Yersinia enterocolitica*, growth 960
- foods, *Clostridium botulinum*, spores, heat resistance 2209
- meat products
 - Clostridium botulinum*, survival, toxins, production, storage, temperature 1922
 - microbial contamination, control, microwave treatment 3050
- offal, microbial contamination, Enterobacteriaceae, determination 2037
- oysters, *Vibrio vulnificus*, survival, cold storage 946
- pasta, *Clostridium botulinum*, survival, toxins, production, storage, temperature 1922
- potassium sorbate, poultry, carcasses, keeping quality 2068
- potatoes, sulfite, treatment, *Clostridium botulinum*, toxins, production 2008
- poultry meat, bacteria, spoilage 154
- sauages
 - Campylobacter jejuni*, survival 984
 - spoilage, lactic acid bacteria, plasmids 2970
- smoked fish, salmon, storage life, microbial contamination 2019
- temperature
 - shrimps
 - Clostridium botulinum*
 - spoilage, USA, Georgia 950
 - toxins, production, USA, Georgia 950
 - turkey meat, microbial contamination, *Clostridium perfringens*, temperature, effects 998

Vallisneria spiralis

- heavy metals, uptake, water 811
- uptake
 - cadmium 2595
 - copper 2595

Vanillin, agar, fruit, moulds, control 3055**Variation, biological fixed-film systems, effluents, quality 347****Vegetable juices**

- carrots
 - antimicrobial properties
 - Listeria monocytogenes*
 - pH 1031

Vegetable juices cont.

- carrots cont.
 - antimicrobial properties cont.
 - Listeria monocytogenes* cont.
 - sodium chloride 1031
 - temperature 1031

Vegetables

- bacteria
 - control
 - antibiotics, resistance 2005
 - disinfectants, resistance 2005
 - enzyme activity 264
 - irrigation
 - waste water
 - nematoda, occurrence, techniques 3372
 - waterborne diseases, Chile 3371
- Listeria*, Malaysia 2004
- microbial contamination, storage 104
- microbial flora, control, lactic acid bacteria 3086
- polluted water, 2,4-dichlorophenol, biodegradation, enzymes 593
- postharvest decay, control, reviews 926
- wastes, anaerobic digestion, mathematical models 3352

Vegetation, management, bioremediation, selenium, polluted soils, USA 3695**Veillonella, waste water treatment, anaerobic digestion, granular sludge, production, characterization 785****Veratryl alcohol**

- regulation
 - manganese
 - lignin peroxidase
 - activity
 - Bjerkandera* 3182
 - Phanerochaete* 3182

Vermicomposting

- industrial wastes, North America 1252
- organic wastes, reviews 3300
- pulp and paper industry, wastes, Spain 3296
- refuse, North America 1252

Vermiculture

- cattle manure, recycling 3359
- effluents, recycling 3359
- Eichhornia crassipes*, recycling 3359
- Verticillium lecanii*, ibuprofen, metabolism, stereochemistry, enantiomers 1685

Vibrio

- identification 1087
- keys 2187
- petroleum, microbial contamination 3008
- survival, sea water 2213

Vibrio cholerae

- dynamics
 - ponds
 - pH, effects, Morocco 3169
 - solar radiation, effects, Morocco 3169
 - temperature, effects, Morocco 3169
 - enzymes, nucleases 2197
 - groundwater, pollution, sewage, India 2227
 - health risk, harbours, sea water, microbial contamination, USA 3031
 - isolation, sewage, Argentina 2182
 - survival
 - crabs, boiling, chitin, effects 3061
 - seafoods, temperature 2018

Vibrio fluvialis, survival, temperature resistance 1097**Vibrio metschnikovii, isolation, sewage, Argentina 2182****Vibrio mimicus, survival, temperature resistance 1097****Vibrio mytili, new species, mussels 1107****Vibrio parahaemolyticus**

- enumeration, differentiation, DNA hybridization 1846
- enzymes, nucleases 2198
- Vibrioparahaemolyticus*, seafoods, enumeration, culture media 120

Vibrio parahaemolyticus

- survival
 - oysters, storage, temperature 2020
 - temperature resistance 1097

Vibrio vulnificus

- control
 - bacteriophages, estuaries, USA 2177
 - fish, heat treatment, pH, thermal radiation 1046
 - oysters
 - diacetyl 2025
 - heat treatment, pH, thermal radiation 1046
 - saucers, oysters 2029
 - interactions, oysters 937
 - seafoods, enumeration, culture media 120
 - survival, oysters, cold storage, vacuum packaging 946
- Vibrio vulnificus techniques, enumeration, differentiation, DNA hybridization 1846**
- Vibrios, oysters, Brazil 2024**
- Vinasse**
 - biodegradation
 - anaerobic digestion 718
 - temperature 720
 - anaerobic treatment 2647
 - utilization
 - biomass production
 - Aspergillus niger* 715
 - Cryptococcus laurentii* 715
- Vinyl chloride, transformation, microorganisms, assessment, aquifers 3457**
- Viruses**
 - Adriatic Sea 3090
 - aphthovirus, survival, beef, cooking, temperature, Argentina 2042
 - coliphages, inactivation, water, ozone + hydrogen peroxide 3074
 - control
 - sewage effluent
 - chlorine 3170
 - disinfection
 - chlorine + peracetic acid 3076
 - ultraviolet radiation, USA 2694
 - ozone 3170
 - detection
 - seawater, polymerase chain reaction 2857
 - sewage, polymerase chain reaction 2857
 - drinking water
 - filters, sand, sorption 2904
 - techniques, concentration, microfiltration 2867
 - effluents, techniques, detection, DNA probes 2868
 - enterovirus
 - fresh water, bacteriophages, models, determination 2902
 - sea water, Mediterranean sea, DNA probes, polymerase chain reaction, comparison 3891
 - water
 - detection, comparisons 2879
 - techniques, recovery, glass wool 2866
 - epidemiology, foodborne diseases 1070
 - foods, reviews 1072
 - groundwater, techniques, detection, DNA probes 2868
 - hepatitis A, wells, microbial contamination, waterborne diseases, schools, Italy 2836
 - hepatitis A virus
 - biological control, bacteria, isolation, animal manures, USA 3083
 - detection, polymerase chain reaction 3091
 - drinking water, detection, polymerase chain reaction 3903
 - inactivation, water, ozone + hydrogen peroxide 3074
 - removal, water, ultraviolet radiation 3068
 - rivers, water, detection, polymerase chain reaction 3187
 - sewage, detection, polymerase chain reaction 3903
 - shellfish
 - detection 2958
 - polymerase chain reaction 2967
 - reversed transcription 2967

Viruses *cont.*

inactivation

- activated sludge, biomass, antiviral properties 3164
- copper, surgical instruments 3092
- effluents, titanium dioxide, light 3089
- iron, surgical instruments 3092
- kinetics, water supply, disinfection, mathematical models 2179
- water, ultraviolet irradiation 3069
- marine environment, identification, DNA probes 235
- persistence, nappies, disposal, landfills 1071
- poliovirus, drinking water, determination, gene probes 2903
- polioviruses, contamination, drinking water, techniques, concentration 2864
- recovery, filters, drinking water 2888
- removal
 - drinking water
 - biological filtration, sand 2897
 - coal, substrates 236
 - sewage effluent, soil 237
 - waste water, biological treatment, on-site 3255
 - water
 - disinfection
 - chlorine 3065
 - copper + silver 3065

rotavirus

- sewage, microbial contamination, Brazil 3364
- surface water, microbial contamination, Brazil 3364
- toxins, water, immunodetection, reviews 3189
- water, techniques, recovery, glass wool 2866

sewage effluent, health hazards, control 2843

sewage effluent disposal, sea water, coastal areas, indicator species 3138

sewage sludge, anaerobic digestion, *Giardia*, cysts 1780

shellfish, contamination, reviews 2969

surface water, techniques, detection, DNA probes 2868

survival

- diapers, contamination, indicator species 3135
- landfill leachates, contamination, indicator species 3135
- poultry, carcass disposal, composting 1771
- rivers, water, techniques, monitoring 3148
- sea water, indicator species, temperature, effects 3154
- sediment, indicator species, temperature, effects 3154
- sewage sludge, application desert soil 3161
- waste water, water 2178

water

- detection, polymerase chain reaction 2862
- reviews 1072
- techniques
 - concentration, cellulose, coagulation 2865
 - detection, ELISA 2884
- water samples, techniques, detection, nucleic acids 2863
- wells, water, detection 2869

Vitamins

production

- molasses, utilization, *Propionibacterium acidipropionici* 479
- sugar, utilization, *Propionibacterium acidipropionici* 479

Volatile compounds

biodegradation

- biological fixed-film systems, mathematical models 2444
- waste water, bioreactors, membranes, activated carbon, aerobic treatment 2446

Volatile compounds *cont.*

formation

sausages

fermentation

starter cultures

Pediococcus pentosaceus

147

Staphylococcus xylosus

147

gases, biological treatment, refuse, determination, GC/MS 1153

odours, monitoring, piggery effluent, aerobic treatment 1763

production, phosphonic acids, biodegradation, *Rhizobium*, lyases 2411

removal

gases, biological treatment, filters, composts 3304

sewage, anaerobic treatment 2695

Volatile fatty acids

anaerobic digestion, efficiency, indicators 3350

biodegradation

anaerobic digestors, kinetics, inhibition 489

bioreactors, anaerobic conditions, sulfates, effects 662

inhibition, anaerobic digestion, sodium 2347

waste water, anaerobic treatment, bioreactors, methane production 2559

diffusivity, biofilms 528

effects, denitrification, activated sludge 3314

fish, feeds, biodegradation, denitrification, anaerobic digestion, fluidized beds 3714

production

beers, spoilage, *Pectinatus frisingensis*, mathematical models 920, 1995

effects, phosphorus, removal, sludges, biological treatment, anaerobic conditions 1658

fish, feeds, anaerobic digestion, fluidized beds 3805

refuse, anaerobic treatment 2692

utilization, biofilms, methane production, kinetics 424

Volatile organic compounds

biodegradation, bacteria, screening 3177

emission, control, landfills, biological filtration, USA 2404

Volvariella volvacea, soybeans, wastes, biomass production 2373**Waferboards**, biodeterioration, termites, control, disodium octaborate 191**Wales**, seafoods, contamination, *Listeria monocytogenes* 2028**Wall paintings**, biodeterioration, fungi, reviews 2108**Walnuts**

contamination

coliform bacteria, gamma radiation, control 2938

moulds, gamma radiation, control 2938

mycotoxins, determination, thin layer chromatography 88

Waste disposal, refuse, USA 3815**Waste gases**

biological filtration

evaluation

ammonia 1271

butanal 1271

mathematical models 3247

methylene chloride, biodegradation, *Hyphomicrobium* 3307

styrene, biodegradation, fungi 3605

biological treatment, bioreactors, membranes, *Xanthobacter* 3251

industry, hydrogen sulfide, removal, biological filtration, composts 1667

waste treatment

biological filtration

biofilms 3267

bioreactors 3267

Waste paperbiodegradation, landfills, *Eubacterium*, *Methanobrevibacter*, methane production, interactions 2391

composting, USA 1251

fast food restaurants, composting, USA 3297

fermentation, ethanol production 2386

food waste, composting, Canada 370

hydrolysis, bioreactors, *Pseudomonas fluorescens*, cellulase 3773

saccharification, ethanol production 2386

utilization, feeds, USA 1405

Waste treatment

anaerobic treatment, sequencing batch reactors 2288

animal manures

biological filtration

biofilms 3267

bioreactors 3267

chemical industry, reviews 1686

Chlorophyta, reviews 333

food processing, reviews 1669

information, world, books 3913

motor cars, production, reviews 1756

pulp and paper industry, effluents, reviews 1695

sewage, anaerobic digestion, books 2798

toxic substances, reviews 1661

waste gases

biological filtration

biofilms 3267

bioreactors 3267

waste water

biological filtration

biofilms 3267

bioreactors 3267

Waste water

aerobic treatment

biological fixed-film systems, sulfates, effects 1214

bioreactors

microorganisms

aerobes 3257

anaerobes 3257

oxidation ditches, methodology 2335

aerobic treatment + anaerobic treatment, pH, control 336

amino acids, removal, biological treatment, comparisons 2252

ammonium, removal, sewage sludge, granules, anaerobic treatment 3705

anaerobic digestion

bentonite, supports 1233

reviews 2349

sepiolite, supports 1233

taic, supports 1233

anaerobic treatment

bioreactors 348

aggregates, bacteria, distribution 2742

microorganisms

aerobes 3257

anaerobes 3257

lagoons, biological filtration, sand, Morocco 2273

microbial flora, characterization 2348

anaerobic treatment + crossflow, microfiltration 1218

application to land, groundwater, microbial contamination, indicator species, bacteria, Spain 1123

aromatic compounds, removal, biological treatment + ozone 3458

azo compounds, biodegradation, microorganisms 1446

bacteriophages, inactivation, ultraviolet radiation, kinetics 2242

biochemical oxygen demand, measurement, biosensors + *Bacillus licheniformis*, efficiency, heavy metals 1149

biodegradation

activated sludge, mathematical models 407

anaerobic digestion, models 1377

biofilms

anaerobic treatment

bioreactors, mathematical models 3274

mathematical models 3273

Waste water cont.

- biological fixed-film systems, aerobic treatment, design, performance 1212
- biological treatment
 - activated sludge, mathematical models, optimization 1284
 - aerobic conditions
 - bacteria, methane production, reviews 1196
 - sulfate reducing bacteria, reviews 1196
 - ammonia, measurement, instrumentation 3196
 - anaerobes
 - sulfates 3814
 - sulfides 3814
 - toxicity 3814
 - application to land, review 1169
 - aquatic plants, Morocco 1362
 - autotrophic microorganisms, kinetics 1632
 - biofilms, competition, microorganisms 1176
 - biological filtration, upward flow, reviews 1260
 - biological fixed-film systems, reviews 1278
 - bioreactors
 - biofilms, Norway 1173
 - fluidized beds, biofilms 1197
 - books 3912
 - cells, respiration, oxygen, transfer 3264
 - chemicals, discharges, inhibition, Finland 768
 - control, performance 1201
 - effluents, irrigation, Kuwait, performance 2363
 - filters, biofilms, control, USA 2311
 - fish ponds, Côte d'Ivoire 1398
 - fluidized beds, anaerobic conditions, biofilms, growth 3822
 - fluidized beds
 - aerobic conditions, biofilms, accumulation 3261
 - mathematical models, Turkey 2282
 - reviews 1182
 - sponges, wire netting 2316
 - heterotrophic microorganisms, kinetics 1632
 - mathematical models 338, 340
 - on-site, viruses, removal 3255
 - phosphorus, removal, mathematical models 3752
 - ponds
 - algae, Israel 3341
 - Chlorella vulgaris* 3342
 - mathematical models, kinetics 422
 - pathogens, mortality, mathematical models, Tanzania 2336
 - review 1169
 - processes, design 332
 - reviews 327
 - rotating biological contactors, upgrading 1396
 - soil fungi 3755
 - soybeans, curd, *Rhodospirillum rubrum* 459
 - upgrading, lime, addition 1194
 - wetlands
 - China 3332
 - constructed
 - design 1366
 - USA 1352
 - review 1169
- biomass
 - sorption
 - microbial activities
 - control
 - cyanides 2140
 - pasteurization 2140
- cadmium
 - adsorption, activated sludge 1580
 - removal, *Rhizopus oryzae*, bioreactors 1583
- Campylobacter*, techniques, isolation 3193
- carbohydrates, biodegradation, activated sludge, α -amylase, enzyme activity 2710

Waste water cont.

- carbonaceous biochemical oxygen demand, evaluation 2249
- characteristics, bioreactors, techniques, determination, respirometry 1304
- chromates, removal, bioreactors, *Enterobacter cloacae* 1666
- chromium, sorption, leaf mould 1571
- contamination, *Rhodocyclus gelatinosus*, characterization 1908
- denitrification
 - biological filtration, filters, design 1645
 - biological treatment, reviews 1646
 - denitrifying bacteria, immobilization, gels + electrodes 3738
 - enzyme activity, mathematical models 3735
 - Paracoccus denitrificans*, bioreactors, cells, immobilization, determination 1627
 - Pseudomonas*, bioreactors, cells, immobilization, determination 1627
 - UK, operation 675
 - USA, operation 675
- desulfurization, hydrogen sulfide, removal, *Ectothiorhodospira shaposhnikovii* 2609
- discharge, regulations, treatment, comparison, USA 329
- disinfection
 - chlorine dioxide, pathogens, control 3163
 - Italy 295
 - ultra violet radiation, bioassays 305
 - ultraviolet radiation 228, 1142
 - faecal coliforms, inactivation 3075
- Escherichia coli*, bacteriophages, survival, indicator species, viruses, assessment 3146
- ethylene dichloride
 - biodegradation
 - biological fixed-film systems, biofilms, thickness, effects 3428
 - bioreactors, design 3416
 - fermentation, molasses, monitoring, methodology 1223
- fluidized beds, anaerobic treatment, control 1177
- heavy metals
 - aquifers, bioremediation, Mexico 3216
 - ions, removal, microorganisms, sorption 3666
 - mineral oils, bioremediation, Mexico 3216
 - removal, aquatic plants 1844
- inorganic salts, naphthalenesulfonic acid, biodegradation, microorganisms, immobilization, sand 3427
- ions
 - removal
 - Anabaena doliolum* 1605
 - Chlorella vulgaris* 1605
- irrigation
 - crops, contamination, pathogens, Israel 3368
 - groundwater, microbial contamination, indicator species, bacteria, Spain 1123
- linear alkylbenzene sulfonate, biodegradation, biological treatment, activated sludge, Italy 2580
- nitrification
 - activated sludge, mathematical models 1642
 - biological filtration, filters, design 1645
 - biological treatment, reviews 1646
 - lagoons
 - algae 1622
 - bacteria 1622
 - Nitrobacter*, characterization, ELISA, Sweden 1816
 - nitrobenzene, biodegradation, aerobic treatment+acid treatment 1427
- nitrogen
 - reduction, biological treatment, wetlands, artificial 3339

Waste water cont.

- nitrogen cont.
 - removal
 - activated sludge, reviews 1298
 - Anabaena*, mathematical models 674
 - biological treatment
 - activated sludge, control, redox potential 617
 - Netherlands 3701
 - books 1278, 1298, 1646-1648, 1867
 - nitrifying bacteria, immobilization, polymers, pellets, Japan 3730
 - Nitrosomonas*, characterization, ELISA, Sweden 1816
 - nutrient removal
 - biological treatment
 - mathematical models 672
 - wetlands, USA 1361
 - nutrients
 - removal
 - activated sludge
 - aerobic conditions, biofilms 3326
 - biological filtration 3699
 - control, expert systems, Germany 671
 - biological treatment
 - comparison, UK 3703
 - Netherlands 3700
 - bioreactors
 - aerobic treatment, anaerobic treatment, USA 2627
 - anaerobic treatment, fluidized beds 1232
 - organic compounds, fluidized beds, biological treatment, anaerobic conditions 1227
 - organic matter, biodegradation, rivers, Germany 3362
 - phenols
 - biodegradation, *Coprinus macrorhizus*, peroxidases 584
 - removal, enzymes + coagulants 3587
 - phosphates, removal, sewage sludge, granules, anaerobic treatment 3705
 - phosphorus
 - reduction, biological treatment, wetlands, artificial 3339
 - removal
 - aerobic treatment + anaerobic treatment, temperature 3742
 - anaerobic conditions, models 686
 - biological treatment, Netherlands 3701, 3750
 - bioreactors, anaerobic conditions 3749
 - preliminary treatment, microstraining, Germany 1779
 - propionate, biodegradation, *Methanorhiz*, granules, bioreactors, performance 1228
 - recycling, prawns, production, ponds, biological filtration 3366
 - saline water
 - biological treatment, bioreactors, activated sludge, Spain 1665
 - oilfields, phenols, biodegradation, biological treatment, bioreactors, bacteria, halophiles, USA 1694
 - sea water, *Salmonella*, survival, trehalose, synthesis 1134
 - seafoods, *Rhodocyclus gelatinosus*, growth rate 2359
 - sewerage, hydrogen sulfide, emission, control, aeration, Kuwait 3260
 - storage, reservoirs, microbial contamination, Israel, physico-chemical parameters, effects 3373
 - sulfates, anaerobic treatment, reviews 2638
 - sulfides
 - organic compounds, toxicity, removal, biological treatment, *Thiobacillus denitrificans* 3430
 - production, *Desulfovibrio desulfuricans*, inhibition, kinetics 666

Waste water cont.

- synthetic
 - biological treatment, biomass, entrapment, cellulose acetate 2271
- milk
 - biological filtration, anaerobic treatment 1680
 - bioreactors, anaerobic treatment 1681
- organic compounds, nitrification, denitrification, rotating biological contactors 1393
- treatment, biological fixed-film systems, Germany 1224
- utilization, soybean products, curd, *Rhodospirillum rubrum*, proteins, production 459
- vegetables, irrigation, waterborne diseases, Chile 3371
- volatile compounds, biodegradation, bioreactors, membranes, activated carbon, aerobic treatment 2446
- volatile fatty acids, biodegradation, anaerobic treatment, bioreactors, methane production 2559
- waste treatment
 - biological filtration
 - biofilms 3267
 - bioreactors 3267
- water, viruses, survival 2178
- zinc, removal, microbial flora, India 2586

Waste water treatment

- abattoirs
 - anaerobic digestion, mathematical models, kinetics 3818
 - fluidized beds, anaerobic conditions 3817
- activated sludge
 - aeration, oxygen, uptake, estimation 2324
 - catalases, enzyme activity, monitoring 1208
 - efficiency
 - aeration, pressure 1305
 - nitrogen, Iraq 2325
 - phosphates, Iraq 2325
 - fluidized beds 2321
 - microbial flora, characterization, Germany 400
 - nitrous oxide, emission 3329
 - oxygen transport, models 1296
 - respiration rate, oxygen transfer, techniques, monitoring 297
 - retention, pyrene, tracer techniques 3331
- aerobic treatment
 - bioreactors
 - bacteria
 - characterization 343
 - identification 343
- anaerobic digesters
 - biofilms, development, calcium 3344
 - membranes, control, measurement, microbial activities 3343
- anaerobic digestion
 - granular sludge, production, *Veillonella*, characterization 785
 - inhibition
 - ammonia 1381
 - chromium 1381
 - methane production, inhibition, sodium 2347
 - wheat straw, biodegradation, cellulose, pulp, production 551
- anaerobic treatment 1231
- application to land, urban areas, China 2364
- artificial wetlands
 - reports 415
 - USA, oxygen, transfer 3336
- biofilms
 - characterization, activity, reviews 3254
 - formation, bioreactors 2281
 - heterotrophic microorganisms, autotrophic microorganisms, competition, mathematical models 1188
 - kinetics 1174
 - oxygen, concentration, determination, microelectrodes 1189

Waste water treatment cont.

- biological filtration 2313
- biological fixed-film systems 381
 - biofilms, thickness, measurement 3355
- biological treatment
 - nitrogen, removal, Sweden 2618
 - phosphorus, removal, Sweden 2618
- bioreactors
 - biofilms, detachment, dynamics, mathematical models 2272
 - 3,4-dichloroaniline, biodegradation 337
 - fluidized beds, mathematical models, optimization 1279
 - hydraulics, mathematical models 335
 - microbial flora, characterization, Germany 400
 - technology 2283
 - books 2280, 2313, 2618, 2634, 2797
 - brewery effluent, anaerobic digestion, kinetics 703
 - Central Europe, management 1147
 - chloroallyl alcohols, biodegradation, bacteria, cultures 1437
 - coal, carbonization, activated sludge, ozone 749
 - coffee industry, biological filtration, anaerobic conditions 694
 - concrete, microbial corrosion 3014
 - control, computer simulation 1660
 - 2,4-D, biodegradation 1559
 - decision analysis, microcomputers, Japan 448
 - denitrification
 - heterotrophic microorganisms, nitrite, accumulation 2625
 - Nitrosomonas* 2633
 - Pseudomonas denitrificans*, bioreactors, models 2624
 - denitrification, microorganisms, immobilization, mathematical models, reviews 3715
 - design, upgrading, nitrification, characterization, activated sludge, Denmark 678
 - disinfection, reviews 1055
 - distillery effluent
 - activated sludge 713
 - biological filtration 713
 - dried fruit, grapes, production, fermentation, ethanol production, Greece 1408
 - Eastern Europe, management 1147
 - effluents
 - biochemical oxygen demand, determination, bioassays 296
 - fatty acids, biological fixed-film systems, methane production 2392
 - Europe, books 835
 - faecal coliforms, removal, biological filtration 1775
 - fluidized beds, bioreactors, biofilms, dynamics 1175
 - fungi, immobilization, organic compounds, production 2277
 - heavy metals, removal, artificial wetlands 3670
 - Hungary, reviews 1773
 - lagoons 2340
 - nitrification
 - bacteria, immobilization dynamic models 3725
 - bioreactors, performance 1624
 - denitrification, control, computer simulation, Germany 339
 - heterotrophic microorganisms 3718
 - microorganisms, metabolism, monitoring, gas production 3723
 - Nitrosomonas* 2633
 - nitrogen
 - removal
 - biological filtration 3726
 - methanol
 - addition
 - UK 3727
 - USA 3727
 - bioreactors 1644
 - bioreactors+biofilms 2629
 - North America, books 835

Waste water treatment cont.

- odour abatement, biological filtration, Germany 766
- olive oil
 - anaerobic digestion, kinetics 423
 - production, activated sludge, models 696
- organic compounds, emission, control, USA, reviews 1171
- oxidation ditches
 - aeration, horizontal flow, effects 419
 - mathematical models 421
- performance, models, reviews 1179
- phosphorus, uptake, enhancement, bacteria 691
- phthalates, adsorption, *Pseudomonas fluorescens*, biomass 1425
- piggery effluent, biological fixed-film systems + aquatic plants 2685
- plant, performance, sewage, quality, models 3256
- plant design
 - automation, reviews 1172
 - optimization, reviews 1172
- ponds
 - algae 1838
 - production, Kuwait 460
 - Brachionus calyciflorus*, growth 3767
 - catalases, enzyme activity, monitoring 1208
 - China 1372
 - design
 - indicator species, removal 3340
 - mathematical models 3337
 - Lemna gibba*, Egypt 2339
 - models 1373
- pulp mill effluent, anaerobic treatment 3776
- reservoirs, water reuse, irrigation, Israel 417
- rivers, catalases, enzyme activity, monitoring 1208
- rotating biological contactors, anaerobic conditions 2357
- Scenedesmus bicellularis*, immobilization, nutrients, removal 2274
- sewage
 - artificial wetlands, USA 1369
 - nitrification, bioreactors+biofilms, Norway 2276
- sewage sludge, pathogens, removal, USA 334
- sludges, paper, processing, *Desulfurhabdus amnigenus*, new species, isolation 3853
- small communities, operation, North America 328
- sugar factory waste
 - activated sludge 713
 - biological filtration 713
- surfactants, biodegradation, lagoons, Spain 637
- technology, books 2808

Waste waters, bioreactors, anaerobic treatment, sulfate reducing bacteria, methanogens, interactions 1788**Wastes**

- aerobic treatment, pathogens, inactivation, temperature 2241
- anaerobic digestion
 - bentonite, supports 1233
 - sepiolite, supports 1233
 - talc, supports 1233
- anaerobic treatment
 - monitoring, gases, measurement 3271
 - pathogens, inactivation, temperature 2241
 - reviews 1220
 - sludges, granules, strength 3276
- biodegradation
 - biogas, production, reviews 3395
 - books 2813
 - lagoons, Italy 281
- biological treatment
 - aerobic treatment, reviews 1209
 - anaerobic digesters, design, India, upland areas 2346
 - books 2794
 - Taiwan 3252
- bioremediation, books 2813

Wastes cont.

- composting
 - application to land, reviews 351
 - microbial flora, characterization 2297
 - microorganisms, temperature, water content, effects 3280
 - odours, control 2306
 - reviews 2790
 - UK 2291
 - USA 3287
 - Switzerland 3285
 - USA 3286, 3298
 - books 2807
- composts, odours, control, scrubbing 2307
- gases, ethene, removal, *Mycobacterium* 2516
- information, world, books 3913
- management
 - environmental impact, assessment, books 275
 - legislation, USA 2236
- methane production
 - anaerobic digestion
 - assessment 439
 - bioreactors 2352
 - utilization, books 2801
 - pectins, biodegradation, anaerobes, pectinase, production 2489
 - reduction, pollution, control, books 308, 327, 506, 708, 829
 - refuse, composting, Spain 2310
 - toxic substances, biological treatment, biotechnology, books 1865
 - utilization, fermentation, lactic acid bacteria, feeds, production 2374

Water

- Aeromonas hydrophila*, survival 251
- atrazine, biodegradation, bacteria 630
- bacteria
 - determination, bacterial count, isopropyl cinodine, nalidixic acid, effects 3907
 - growth, kinetics 28
 - isolation, flow cytometry 3176
- bacteriophages, inactivation, ultraviolet irradiation 3069
- Campylobacter coli*, detection, polymerase chain reaction 821
- Campylobacter jejuni*, detection, polymerase chain reaction 821
- coliphages
 - detection, Brazil 1119
 - inactivation, ozone + hydrogen peroxide 3074
- contamination, *Legionella*, isolation 2855
- cooling, cucumbers, bacteria, contamination, chlorine dioxide, control 2952
- disinfectants, synergism, bacteria, control 224
- disinfection
 - chlorine, viruses, removal 3065
 - copper + silver, viruses, removal 3065
- enterococci, identification 3905
- enterovirus
 - detection, comparisons 2879
 - techniques, recovery, glass wool 2866
- Escherichia coli*
 - detection
 - bioassays, beta-glucuronidase 3904
 - gene probes, assays 2720
 - disinfection 2161
 - enumeration, culture media 21
 - faecal coliforms, enumeration, culture media 21
 - hepatitis A virus
 - inactivation, ozone + hydrogen peroxide 3074
 - removal, ultraviolet radiation 3068
 - Legionella*, new species, isolation 1110
 - Legionella pneumophila*, Singapore 840
 - Listeria innocua*, viability, detection, temperature 2889
 - mercury, production, microorganisms 3663
 - microbial contamination
 - Aeromonas, Larus delawarensis*, public health 3227

Water cont.

- microbial contamination cont.
 - coliform bacteria, *Larus delawarensis*, public health 3227
 - pig slurry, application to land, indicator species 2223
 - Salmonella, Larus delawarensis*, public health 3227
- microbiology, techniques, sampling, quality 20
- microorganisms, detection, reviews 3190
- pathogens
 - detection
 - polymerase chain reaction 2861
 - reviews 838
 - quality, monitoring, bacteria, indicator species, assays 27
- recreational
 - microbial contamination, health hazards 2835
 - water quality, health hazards, *Salmonella* + indicator species 3139
- rotavirus, techniques, recovery, glass wool 2866
- Salmonella*, detection 2776
- Streptococcus*, antibiotics, resistance 1112
- toxins
 - pathogens, immunodetection, reviews 3189
 - rotavirus, immunodetection, reviews 3189
- viruses
 - detection, polymerase chain reaction 2862
 - inactivation, ultraviolet irradiation 3069
 - reviews 1072
 - techniques
 - concentration, cellulose, coagulation 2865
 - detection, ELISA 2884
- waste water, viruses, survival 2178
- Water activity**, seeds, fungi, aflatoxins, production, melons, Nigeria 898
- Water distribution**
 - biofilms, growth, disinfection, effects 1052
 - heating systems, *Legionella pneumophila*, occurrence, Finland 1027
 - pipelines, hospitals, *Legionella pneumophila*, control, ultraviolet radiation 3036
- pipes
 - bacteria, growth, techniques, monitoring, bacterial count 2895
 - contamination
 - heterotrophic microorganisms
 - techniques
 - determination, Finland 2893
 - monitoring, culture media, Japan 2894
 - corrosion, bacteria, resistance, copper, genes 3038
 - disinfection, residual effects, bacterial count 3037
 - water quality, microorganisms, disinfectants, substrates, transport, mathematical models 1748
- Water pollution**
 - aliphatic hydrocarbons, bioremediation, reviews 3207
 - animal manures, ponds, algae, growth 2683
 - bacteria, pathogens, heavy metals, India 1917
 - chlorinated hydrocarbons, bioremediation, bacteria 312
 - control
 - wetlands 1861
 - constructed, reviews 1330
 - Europe, books 835
 - North America, books 835
 - petroleum hydrocarbons, bioremediation, reviews 3207
 - reservoirs, *Microcystis*, bacterial toxins, *Daphnia*, toxicity 1804
 - rivers
 - India, techniques, detection, indicator species, *Escherichia coli* 1125

Water pollution cont.

- rivers cont.
 - reovirus, epidemiology, Japan 2225
 - sea water, coastal areas, bacterial count, Australia 3150
- Water purification**
 - algae, concentration 3788
 - bank filtration, humus, transformation, microorganisms, growth 1749
 - biological filtration, sand, mathematical models 740
 - biological treatment
 - activated carbon
 - beds
 - Acinetobacter junii*, inoculation 1747
 - Rhodococcus rhodochrons*, inoculation 1747
 - filters
 - algae, fouling 3785
 - sand 3787
 - chlorophenols, removal, biological fixed-film systems 2548
 - Cryptosporidium parvum*, removal, treatment, processes 3784
 - disinfection
 - chloramine
 - cupric chloride
 - Escherichia coli*, inactivation, synergism 1746
 - MS-2 coliphage, inactivation, synergism 1746
 - Hungary, reviews 1773
 - nitrite, removal, *Chlamydomonas reinhardtii*, bioreactors 2630
 - techniques, water quality, coliform count, waterborne diseases, Canada 2891
 - triazine herbicides, biodegradation, activated carbon, bacteria, inoculation 3631
 - units, drinking water, pathogens, removal 3067
 - works, cyanobacteria, toxicity, Costa Rica 1914
- Water quality**
 - algae, recognition, microscopy, computer analysis, algorithms 3186
 - coliform bacteria, detection, methodology, assessment 857
 - criteria, surface water, pollution, sewage, Russia 3141
 - Escherichia coli*, detection, methodology, assessment 857
 - water, recreational, health hazards, *Salmonella* + indicator species 3139
 - water distribution, microorganisms, disinfectants, substrates, transport, mathematical models 1748
 - water purification, techniques, coliform count, waterborne diseases, Canada 2891
 - water supply, lakes, algae, organic compounds 1 production, effects 2905
 - wells, contamination, faeces, coliform bacteria 2228
- Water reuse**
 - effluents, irrigation, standards 288
 - irrigation
 - septic tank effluent, Israel 2389
 - waste water treatment, reservoirs, Israel 417
 - pigmeat, carcasses, microbial flora 974
- Water samples**, viruses, techniques, detection, nucleic acids 2863
- Water supplies**, microbial contamination, health hazards, Maldives 2834
- Water supply**
 - biofilms, formation, plastic pipes, biodeterioration, bacteria, characterization, dental health 2838
 - disinfection, viruses, inactivation, kinetics, mathematical models 2179
 - distribution systems, pipes, materials, *Legionella pneumophila*, biofilms, formation 3034
 - Dreissena polymorpha*, larvae, removal, aluminium sulfate 223
 - Europe, books 835
 - lakes, water quality, algae, organic compounds 1 production, effects 2905

Water supply cont.

- Legionella pneumophila*, *Hartmannella vermiformis*, chlorine, heat treatment, survival 3035
- microbial contamination
 - Cryptosporidium*, Canada 2841
 - Giardia*, Canada 2841
- microbial flora, characterization, Costa Rica 739
- North America, books 835
- poultry farming, *Campylobacter*, detection 3894

Water systems

- drainage, microorganisms, population dynamics, aerobic conditions, biomass 3824
- isothiazolone, treatment, antibiotic resistance, *Pseudomonas aeruginosa*, culture media 1028
- laboratories, bacteria 2131
- Legionella*
 - control, ultraviolet radiation 1029
 - isolation 210
- Legionella pneumophila*, Greece 8
- microbial contamination
 - biocides, control, bacteria, resistance 2133
- Pseudomonas aeruginosa*, slimes, formation, characterization 3029
- microbial corrosion, research, South Africa 1030
- Pseudomonas cepacia*, iodine, resistance 263

Waterborne diseases

- Scandinavia, reviews 2900
- surveys, sewage effluent disposal, beaches, swimming, Australia 2832
- swimming
 - control
 - legislation
 - Europe 280
 - North America 280
 - microbiology standards
 - Europe 280
 - North America 280
- vegetables, irrigation, waste water, Chile 3371
- water purification, techniques, water quality, coliform count, Canada 2891
- wells, microbial contamination, hepatitis A, schools, Italy 2836

Watermelon, slicing, *Campylobacter jejuni*, survival 930**Watermelons, storage, *Escherichia coli*, survival, temperature 2007****Watersheds, contamination, *Giardia*, USA 3144****Waterways, algal blooms, Australia, economics, externalities 3140****Wells**

- clogging, iron, oxidation, microorganisms 3033
- contamination, faeces, coliform bacteria, water quality 2228
- microbial contamination, hepatitis A, waterborne diseases, schools, Italy 2836
- water, viruses, detection 2869

Wetlands

- acid mine drainage, biological treatment, Australia 1359
- artificial
 - dairy waste water, biological treatment, New Zealand 3763-3764
 - nitrogen, reduction, waste water, biological treatment 3339
 - phosphorus, reduction, waste water, biological treatment 3339
- artificial wetlands
 - Phragmites australis*, sewage effluent, DDT, removal 3335
- sewage
 - biological filtration, UK 1374
 - waste water treatment, USA 1369
- waste water treatment
 - heavy metals, removal 3670
 - reports 415
 - USA, oxygen, transfer 3336

Wetlands cont.

- constructed
 - acid mine drainage, biological treatment 1354
 - dairy effluent, biological treatment, *Schoenoplectus validus*, New Zealand 1340
 - denitrification 1332
 - design
 - sewage, biological treatment 1366
 - waste water, biological treatment 1366
 - lagoons, aquatic plants, comparisons, Australia 1341
 - landfill leachates, biological treatment, aquatic plants 1360
 - nutrients
 - removal
 - Phragmites australis*, USA 1349
 - rivers, Australia 1348
 - pollution control, aquatic plants, USA 1347
 - pulp mill effluent, biological treatment 1356
 - runoff, treatment, Australia 1342
 - sewage
 - biological treatment
 - aquatic plants, selection 1339
 - Australia 1336
 - higher plants 1338
 - USA 1365
 - low strength, biological treatment, Canada 1337
 - waste water, biological treatment, USA 1352
 - waste water treatment, evaluation, mathematical models 1371
 - water pollution, control, reviews 1330
 - dairy effluent, denitrification, New Zealand 1367
 - food processing, waste water, biological treatment, USA 1670
 - heavy metals
 - removal
 - acid mine drainage
 - aerobic treatment, USA 1358
 - anaerobic treatment, USA 1358
 - lagoons, sewage effluent, biological treatment, Australia 1350
 - meat production, waste water, denitrification, New Zealand 1367
 - meatworks effluent, denitrification, *Glyceria maxima* 1331
 - metals, removal, cyanobacteria, reviews 3652
 - nitrate, removal, aquatic plants, New Zealand 1345
 - nutrient removal
 - sewage, biological treatment 1353
 - waste water, biological treatment, USA 1361
 - nutrients
 - removal
 - sewage effluent
 - Australia 1351
 - biological treatment, Australia 1364
 - pollution, sewage, Papua New Guinea 1343
 - reed beds, sewage, biological treatment, Japan 1335
 - sediment
 - aerobic conditions, atrazine, biodegradation, USA 2649
 - anaerobic conditions, atrazine, biodegradation, USA 2648
 - sewage
 - biological treatment, Australia, water depths, effects 1344
 - nitrogen, removal 1368
 - waste water
 - biological treatment
 - China 3332
 - review 1169
 - water pollution, control 1861

Wheat

- contamination, fungi, control, essential oils 1977

Wheat cont.

- food grains
 - biodegradation
 - Aspergillus clavatus* 902
 - Aspergillus nidulans* 902
 - fusarochromanone, detection, liquid chromatography 75
 - residues, fermentation, yeasts, ethanol production 2387
 - storage decay, fungi, control, essential oils 1978
 - water content, spoilage, moulds, Tropics 1976

Wheat bran, biodegradation, *Aspergillus niger*, fermentation, mathematical models 544**Wheat straw**

- animal manures, composting, mushroom compost, production, mathematical models 1242
- biodegradation
 - bacteria, polysaccharidases, addition 550
 - cellulose, pulp, production, waste water treatment, anaerobic digestion 551
 - fungi
 - enzymes, evaluation 3526
 - fermentation 3301
 - Ganoderma lucidum*, enzymes, production 2752
 - mineralization, fungi 3513
 - Phanerochaete chrysosporium*, gases, comparisons 1463
 - Pleurotus sajor caju*, enzymes, production 2752
 - Pycnoporus sanguineus*, enzymes, production 2752
 - Sporotrichum thermophilum*, enzymes, production 1472
 - Thermoascus aurantiacus*, xylanase, characterization 2753
 - Thermomonospora fusca*
 - endoglucanase, synthesis 1482
 - peroxidases, synthesis 1482
 - xylanase, synthesis 1482
- fermentation, *Pleurotus sajor-caju*, gases, effects 2486
- silage making, molasses, silage additives 758
- utilization
 - heat treatment, edible fungi, production 1403
 - single cell protein, production, yeasts 458

Whey

- aflatoxins, production, *Aspergillus flavus* 706
- anaerobic digestion, metals, methane production, India 1390
- biological filtration, anaerobic conditions, design 2317
- fermentation
 - Candida kefyr*, aeration, ethanol, production 3382
 - ethanol production, *Kluyveromyces fragilis*, kinetics 1410
 - waste water, chemical oxygen demand, reduction, *Yarrowia lipolytica* 705
- filtration, bacteria, removal 161
- Pseudomonas*, proteinases, heat treatment 2082
- utilization
 - Aureobasidium pullulans*, proteinases, production, characterization 710
 - biomass, production, *Kluyveromyces marxianus* 705
 - ethanol production, *Candida pseudotropicalis*, models, kinetics 473
 - xanthan, gums, production, *Xanthomonas campestris*, gene transfer 2378

Whey cheese

- biodegradation, anaerobic digestion, microorganisms, immobilization, supports 707
- effluents, biological treatment, bioreactors, anaerobic conditions 2644

- Whisky**, production, wastes, anaerobic digestion 1675
- White sugar**, microbial flora, Hungary 84
- Wine distillery waste water**, methane production, anaerobic treatment, microorganisms, immobilization 482
- Wine making**, yeasts, biodeterioration, Argentina 918
- Winemaking**
killer yeasts, Italy 3128
yeasts, phenotypes, Spain 268
- Winemaking residues**
activated sludge
efficiency, Italy 3330
optimization 3313
- Wines**
cork, chlorophenol, transformation, moulds 2999
corks, fungi, growth, identification 1012
ethanol, yeasts, spoilage, resistance 1921
Lactobacillus paracasei subsp. *paracasei*, identification, Portugal 92
Leuconostoc oenos, identification, Portugal 92
organic acids, yeasts, spoilage, resistance 1921
production, waste water, biological filtration, anaerobic conditions 1664
spoilage
Lactobacillus hilgardii, monitoring, lactic acid 93
yeasts, differentiation, fatty acids 1992
Zygosaccharomyces bailii, fatty acids, ethanol, temperature, effects 2750
- Wood**
biodegradation
biofilms, enzyme activity, aquatic environment, Australia 2479
wood destroying fungi 186
oxidoreductases, production 3525
biodeterioration
Coriopsis occidentalis 1013
fungi, polysaccharides 2113
Serpula lacrimans, control, *Trichoderma* 213
stain fungi, petroleum, fractions, control 2148
termites, control, creosote, fuel oils 188
cells, biodegradation, wood destroying fungi, analysis, spectroscopy 2106
decay, wood preservatives, efficiency 1016
stain fungi, enzyme activity, detection 2105
- Wood borers**
isopoda
marine environment
bacteria, associations, Egypt 3820
fungi, associations, Egypt 3820
marine borers, *Xylophaga atlantica* 2107
- Wood chips**
biodeterioration, *Benula papyrifera*, *Phellinus noxius* 2099
biological filtration, septic tank effluent, treatment, USA 383
sewage sludge, composting, organic matter, biodegradation, moisture 354
- Wood destroying fungi**
control, *Trichoderma*, antifungal agents, production 2104
dyes, decolorization 3780
enzyme activity, assays 1851
enzymes 556
Ganoderma lucidum 2485
growth, polluted soils, pentachlorophenol, biodegradation, methodology 3590
heavy metals, uptake 1575
isolation, culture media 2784
lignin, biodeterioration, sulfate pulping, waste water 2656
olive oil, mills, waste water, biological treatment 3758
Phanerochaete chrysosporium 2482
Phellinidium aciferum, new species, China 2217
pollutants
biodegradation 306
reviews 307, 3205
- Wood destroying fungi cont.**
timbers, biodeterioration, mushroom houses, Poland 3002
Trichoderma, antagonism 2103
wood
biodegradation 186
oxidoreductases, production 3525
cells, biodegradation, analysis, spectroscopy 2106
- Wood panels**
biodeterioration
moulds 2101
stain fungi 2101
production, waste water, bioreactors, aerobic treatment 2680
- Wood preservatives**
chitosan, copper chrome arsenate 192
copper naphthenate, *Pinus*, termites, resistance 189
disodium octaborate, waferboards, biodeterioration, termites, control 191
efficiency
timbers, biodeterioration, mushroom houses 3003
wood, decay 1016
product development, UK 1015
- Wood products**, fibres, adhesion, urea-formaldehyde, composting 2298
- Wood pulp**
biological treatment, bleaching, *Phanerochaete sordida*, manganese peroxidase, metals, effects 2657
bleaching, *Humicola*, xylanases, purification 805
- Wood residues**
biogas, production 488
composting, economics, USA 366
fuels, production 488
- Wool industry**, effluents, anaerobic treatment, flocculation 737-738
- World**
waste treatment, information, books 3913
wastes, information, books 3913
- Xanthan**
gums, production, whey, utilization, *Xanthomonas campestris*, gene transfer 2378
production, citrus fruits, wastes, fermentation, *Xanthomonas campestris* 477
- Xanthobacter**
epoxyalkanes, biodegradation 2522
waste gases, biological treatment, bioreactors, membranes 3251
- Xanthobacter autotrophicus**
dehalogenase, genes, nucleotide sequences 3842
dichloroacetic acid, soil, biodegradation 3418
immobilization, dichloroacetic acid, biodegradation 3417
- Xanthomonas campestris**
citrus fruits, wastes, fermentation, xanthan, production 477
gene transfer, whey, utilization, xanthan, gums, production 2378
vegetables, enzyme activity 264
- Xylan**
biodegradation
Bacillus polymyxa, enzymes 2704
Clostridium, xylanase, production 2736
enzymes, complexes, reviews 543
Fibrobacter succinogenes, xylanase, production, genes 3534
fungi, enzymes, screening 814
Irpex lacteus, xylanases 546
Phanerochaete chrysosporium 3874
cellobiose hydrogenase 2482
Rhodothermus marinus, enzymes 3873
Spirochaeta thermophila 794
Streptomyces, xylanase, characterization 3524
Streptomyces cyaneus, xylanases, characterization 2749
sulfite pulping, *Aureobasidium pullulans* enzymes 3775
- Xylan cont.**
biodegradation cont.
xylanase
Bacillus stearothermophilus, genes, identification, identification 3901
production, *Trichoderma reesei* 535
 β -xylosidase, *Bacillus stearothermophilus*, genes, identification, identification 3901
hydrolysis, *Actinomadura*, xylanase, genes, cloning 803
utilization, *Bacillus circulans*, xylanase, production 608
- Xylanolytic microorganisms**
Actinomadura 803
Aspergillus niger 1827
Aureobasidium pullulans 3871
Bacillus polymyxa 2704
Caldocellum saccharolyticum 1831
Chaetomium globosum 1827
Fibrobacter succinogenes 3534
Humicola 805
Irpex lacteus 546
Phanerochaete chrysosporium 3874
Spirochaeta thermophila 794
Streptomyces cyaneus 2749
Streptomyces lividans 802
Talaromyces emersonii, enzymes, characterization 1837
techniques, screening, dyes 2783
Thermomyces lanuginosus 555
- Xylene**
biodegradation
aerobic conditions, *Pseudomonas maltophilia* 3554
biofilms
membranes
dynamics, mathematical models 1493
flow velocities 1494
groundwater, Australia 3222
Pseudomonas, enzyme activity, gene amplification 2505
Pseudomonas putida, enzymes, characterization 3552
soil, bacteria, luminescence 2532
mixtures, biodegradation, benzene, toluene, *Pseudomonas putida*, genetic engineering 2504
removal, biofilms+membranes 2445
- Xylitol**, production, xylene, utilization, yeasts, oxygen 516
- Xylitol production**, agricultural wastes, utilization, *Candida guilliermondii* 2474
- Xylophaga atlantica**, wood borers, marine borers 2107
- Xylose**
biodegradation
hydrogen, production, *Clostridium* 1478
Malbranchea pulchella var. *sulfurea*, enzymes 809
poly- β -hydroxybutyric acid production
Alcaligenes eutrophus 3522
Lactococcus lactis 3522
- fermentation**
Escherichia coli
ethanol production
aeration 476
kinetics 3379
hydrogen, production, *Clostridium*, growth 3531
Pichia stipitis, ethanol production, bioreactors, optimization 549
metabolism, *Saccharomyces cerevisiae* 2754
reduction
Candida guilliermondii 2566
Candida parapsilosis 2566
utilization
ethanol production, yeasts, oxygen 516
xylitol, production, yeasts, oxygen 516
- Yarrowia lipolytica**, whey, fermentation, waste water, chemical oxygen demand, reduction 705

Yeasts

- aromatic hydrocarbons, biodegradation 1506
- beef, contamination 133
- beverages
 - microbial contamination, detection 1994
 - Nigeria 91
 - spoilage, sorbic acids, resistance 1121
- biodegradation, wine making, Argentina 918
- biomass, heavy metals, removal, industrial wastes 2599
- butter, fatty acids 2086
- cheeses, determination, Spain 2088
- control
 - alcoholic beverages
 - spoilage
 - coumaric acids 2151
 - potassium sorbate 2151
 - cinnamon, almond paste 2940
 - lactic acid bacteria, inoculation, silage, spoilage 3811
 - sorbic acid, almond paste 2940
 - effluents, organic acids, biodegradation 3408
 - fermentation, sweet potatoes, hydrolysis, hydrochloric acid, ethanol production 3378
 - fish scrap, molasses, fermentation 759
 - foods
 - microbial contamination 1927
 - spoilage
 - detection, electrical activity 1928
 - sorbic acids, resistance 1121
 - fruit juices, contamination, detection, electrical conductivity 2945
 - immobilization, sugar industry, waste water, anaerobic treatment, ethanol production 721
 - isolation, identification, molasses, Mexico 3129
 - molasses, biodegradation, biomass production 711
 - phenanthrene, biodegradation, marine sediments, USA 2510
 - phenotypes, winemaking, Spain 268
 - polycyclic hydrocarbons, biodegradation, marine sediments, USA 2510
 - prepared foods, salads, UK 99
 - production, waste water, anaerobic treatment, bioreactors 1671
 - prostheses, rubber, microbial contamination, biofilms, characterization 1018
 - resistance, fish, preservation, propionic acid, isolation 936
 - sausages, fermentation, moulds, Italy 2060
 - spoilage
 - resistance
 - wines
 - ethanol 1921
 - organic acids 1921
 - sulfates, utilization 651
 - sulfonates, utilization 651
 - toxins, production, determination 1963
 - wheat, residues, fermentation, ethanol production 2387
 - wheat straw, utilization, single cell protein, production 458
 - wines, spoilage, differentiation, fatty acids 1992
 - xylose
 - utilization
 - ethanol production, oxygen 516
 - xylitol, production, oxygen 516

Yersinia

- abattoirs
 - machinery, microbial contamination 2130
 - pigs, carcasses, microbial contamination 2130
 - poultry products, microbial contamination 156
 - sausages, microbial contamination 2062
- Yersinia enterocolitica**
- beef, Morocco 2032
 - chicken meat, Morocco 2032
 - detection
 - detection, RNA probes 3897
 - polymerase chain reaction 2876

Yersinia enterocolitica cont.

- enterotoxins, production 2915
- foodborne diseases 841
- foods, detection, polymerase chain reaction 1935
- growth
 - beef
 - modified atmosphere storage 960
 - vacuum packaging 960
 - lamb (meat), modified atmosphere storage, packaging 2981
 - models 252
 - temperature, virulence, plasmids 254
- inhibition, *Yersinia kristensenii*, bacteriocins, biological control 1068
- isolates, identification, *Yersinia kristensenii*, bacteriocin 853
- isolation, food, antibacterial agents, comparisons 44
- physiology, temperature, virulence, plasmids 254
- pigmeat
 - isolation 975, 1889
 - Morocco 2032
- pigs, carcasses, Trinidad and Tobago 2051
- prepared foods, isolation 975
- rivers, isolation 1889
- survival
 - pigmeat, modified atmosphere storage 2049
- sausages
 - sodium nitrite 986
 - starters 986

Yersinia kristensenii, bacteriocins, *Yersinia enterocolitica*, inhibition, biological control 1068**Yersinia pseudotuberculosis**

- pigmeat, isolation 1889
- rivers
 - Germany, isolation 1910
 - isolation 1889
 - Japan, isolation 1910

Yoghurt, contamination, *Escherichia coli*, resistance, antibiotics, Iran 2996**Zea mays**, cake, biodegradation, temperature, humidity 905**Zeolites**, additives, anaerobic digestion, biogas, production, pig slurry, Cuba 1422**Zimbabwe**

- crocodiles, farming, waste water, salmonellae, techniques, enumeration 1815
- Eichhornia crassipes*, heavy metals, uptake, rivers 2587

Zinc

- bacterial leaching, dust, filters, industry, leaching agents, citric acid 2598
- electroplating waste water, starch, biodegradation, anaerobes, methane inhibitors 1221
- extraction
 - biomass, decontamination, nitrilotriacetic acid 3657
 - Pseudomonas fluorescens*, decontamination, nitrilotriacetic acid 3657
- polluted soils
 - bioremediation
 - Silene vulgaris* 1164
 - Thlaspi caerulescens* 1164
- removal
 - acid mine drainage, bioreactors 745
 - waste water
 - aquatic plants 1844
 - microbial flora, India 2586
- rocks
 - bacterial leaching
 - Thiobacillus ferrooxidans* 747
 - Thiobacillus thiooxidans* 747
- sorption, *Thiothrix* 2585
- uptake
 - Ascomyllum nodosum*, alginates, leaching, effects 1574
 - cadmium, *Saccharomyces cerevisiae* 2767
 - drainage channels, spoil banks 1581
 - Eichhornia crassipes*, rivers, Zimbabwe 2587

Zirconium

- uptake
 - algae 649

Zirconium cont.

- uptake cont.
 - Cyanobacteria 649
- Zoogloea*, growth, nitrification, denitrification, activated sludge, bulking 1324
- Zoogloea ramigera*, biofilms, sewage, biological treatment, fluidized beds, mathematical models, substrates, utilization 1805
- Zygosaccharomyces bailii*
 - fatty acids, wines, spoilage, ethanol, temperature, effects 2750
 - food spoilage, identification, polymerase chain reaction 270
- Zygosaccharomyces bisporus*, food spoilage, identification, polymerase chain reaction 270
- Zygosaccharomyces rouxii*, foods, water activity, isolation, culture media 882
- Zymomonas*, apple juice, fermentation, ethanol production 3376
- Zymomonas mobilis*, glucose, fructose, fermentation, ethanol production 3479

LIST OF SERIALS ABSTRACTED

Listed below are the titles of the serial publications (excluding most annual reports and conference proceedings) abstracted during 1995 for this journal.

Many other serials were scanned during 1995 but no relevant articles were selected. A full list of all the serials scanned for items suitable for abstracting for the CAB ABSTRACTS database and the whole range of CABI's abstract journals is given in the *CAB International Serials Checklist, 1988 edition*. The publication includes ISSNs and publishers' addresses.

- | | |
|--|--|
| Acta Agriculturae Scandinavica. Section B, Soil and Plant Science | Bodenkultur |
| Acta Biotechnologica | Botanica Marina |
| Acta Horticulturae | British Food Journal |
| Acta Hydrobiologica Sinica | British Poultry Science |
| Acta Microbiologica Bulgarica | British Standard |
| Acta Microbiologica et Immunologica Hungarica | Bulletin of Environmental Contamination and Toxicology |
| Acta Microbiologica Hellenica | Bulletin of the Faculty of Agriculture, Saga University |
| Acta Microbiologica Hungarica | Bulletin of the International Dairy Federation |
| Acta Microbiologica Polonica | Business Economics |
| Acta Mycologica Sinica | Cahiers de Nutrition et de Diététique |
| Acta Veterinaria et Zootechnica Sinica | Canadian Journal of Forest Research |
| Advances in Biochemical Engineering/Biotechnology | Canadian Journal of Microbiology |
| Agricultural Water Management | Central European Journal of Public Health |
| Agrochimica | Centro Azúcar |
| Agronomie Tropicale | Cereal Foods World |
| Air & Waste | Chemistry and Industry (London) |
| Alimentaria | Chemistry Letters |
| Alpe Adria Microbiology Journal | Chemistry of Natural Compounds |
| Ambio | Chemosphere |
| American Industrial Hygiene Association Journal | Clinical and Experimental Allergy |
| Analytica Chimica Acta | Clinical and Experimental Immunology |
| Analytical Biochemistry | Comparative Biochemistry and Physiology. B, Comparative Biochemistry |
| Analytical Chemistry (Washington) | Compost Science & Utilization |
| Angewandte Botanik | Conservator |
| Animal Science and Technology | Continental Shelf Research |
| Annales Botanici Fennici | Critical Reviews in Biotechnology |
| Annali di Microbiologia ed Enzimologia | Critical Reviews in Environmental Science and Technology |
| Annual Report - West Virginia Agricultural and Forestry Experiment Station | Critical Reviews in Microbiology |
| Annual Review of Microbiology | Cryptogamie, Mycologie |
| Antonie van Leeuwenhoek | Cukoripar |
| Applied and Environmental Microbiology | Current Microbiology |
| Applied Biochemistry and Biotechnology. Part A, Enzyme Engineering and Biotechnology | Current Opinion in Biotechnology |
| Applied Microbiology and Biotechnology | Current Science |
| Aquaculture | Dairy, Food and Environmental Sanitation |
| Archiv für Lebensmittelhygiene | Dirasat. Series B, Pure and Applied Sciences |
| Archives of Biochemistry and Biophysics | Doğa, Türk Biyoloji Dergisi |
| Archives of Disease in Childhood | Doklady, Biological Sciences |
| Archives of Microbiology | Ecodecision |
| Archivos Latinoamericanos de Nutrición | Ecological Modelling |
| Arquivos de Biologia e Tecnologia | Ecotoxicology and Environmental Safety |
| ASEAN Food Journal | Egyptian Journal of Food Science |
| Asian Fisheries Science | Egyptian Journal of Microbiology |
| ASM News (Washington) | Environment and Ecology |
| Assiut Veterinary Medical Journal | Environment International |
| Atmospheric Environment | Environmental Geochemistry and Health |
| Australasian Biotechnology | Environmental Health Perspectives |
| Avian Diseases | Environmental Management |
| Background Report - European Communities Commission | Environmental Monitoring and Assessment |
| Biochemical Society Transactions | Environmental Pollution |
| Biochemistry and Molecular Biology International | Environmental Progress |
| BioCycle | Environmental Science & Technology |
| Biodegradation | Environmental Technology |
| Biodeterioration Abstracts | Environmental Toxicology and Chemistry |
| Biodiversity and Conservation | Environmental Toxicology and Water Quality |
| Biofutur | Environmetrics |
| Biológia (Bratislava) | Enzyme and Microbial Technology |
| Biology and Environment. Proceedings of the Royal Irish Academy, Section B | Epidemiology and Infection |
| Biology Bulletin of the Russian Academy of Sciences | Estuarine, Coastal & Shelf Science |
| Biomass and Bioenergy | Ethiopian Medical Journal |
| Bioprocess Engineering | European Dairy Magazine |
| Bioresource Technology | European Journal of Soil Biology |
| BioScience | Experientia |
| Bioscience, Biotechnology and Biochemistry | Experimental Mycology |
| Biosensors & Bioelectronics | FASEB Journal |
| Biotechnology Advances | FEMS Microbiology Ecology |
| Biotechnology and Applied Biochemistry | FEMS Microbiology Letters |
| Biotechnology and Bioengineering | Fleischwirtschaft |
| Biotechnology Education | Folia Microbiologica |
| Biotechnology Letters | Food Additives and Contaminants |
| Biotechnology Techniques | Food and Agricultural Immunology |
| Biuletyn Warzywnicz | Food Australia |
| | Food Biotechnology |
| | Food Chemistry |

- Food Control
 Food Microbiology
 Food Quality and Preference
 Food Research International
 Food Technologist
 Food Technology (Chicago)
 Forest Products Journal
 Fresenius Environmental Bulletin
 Freshwater Biology
 Fruitteelt (Den Haag)
 Gene
 Genetic Engineer and Biotechnologist
 Genetic Engineering News
 Gesundheitswesen
 Hayvan Aşları Kontrol Merkezi Müdürlüğü Dergisi
 Hazardous Waste & Hazardous Materials
 Helminthologia
 Higiene Alimentar
 Hindustan Antibiotics Bulletin
 Hitachi Zosen Technical Review
 Holzforschung
 HortScience
 Hydrobiologia
 Hydrological Sciences Journal
 Igiene Moderna
 Indian Coconut Journal (Cochin)
 Indian Journal of Agricultural Sciences
 Indian Journal of Animal Sciences
 Indian Journal of Dairy Science
 Indian Journal of Environmental Health
 Indian Journal of Experimental Biology
 Indian Journal of Microbiology
 Indian Journal of Mycology and Plant Pathology
 Indian Journal of Poultry Science
 Indian Veterinary Journal
 Industrie Alimentari
 Industrie delle Bevande
 Ingegneria Alimentare, Le Conserve Animali
 Interciencia
 International Agricultural Engineering Journal
 International Biodeterioration & Biodegradation
 International Journal of Animal Sciences
 International Journal of Environment and Pollution
 International Journal of Environmental Analytical Chemistry
 International Journal of Environmental Health Research
 International Journal of Environmental Studies
 International Journal of Food Microbiology
 International Journal of Food Science & Technology
 International Journal of Hydrogen Energy
 International Journal of Systematic Bacteriology
 Italian Food & Beverage Technology
 Japanese Journal of Dairy and Food Science
 Japanese Journal of Soil Science and Plant Nutrition
 JARQ, Japan Agricultural Research Quarterly
 Journal of Agricultural & Environmental Ethics
 Journal of Agricultural and Food Chemistry
 Journal of Agricultural Engineering Research
 Journal of Agricultural Science
 Journal of AOAC International
 Journal of Applied Animal Research
 Journal of Applied Bacteriology
 Journal of Applied Phycology
 Journal of Applied Poultry Research
 Journal of Aquatic Ecosystem Health
 Journal of Bacteriology
 Journal of Basic Microbiology
 Journal of Biological Chemistry
 Journal of Biosciences
 Journal of Biotechnology
 Journal of Chemical Technology & Biotechnology
 Journal of Chromatography
 Journal of Environmental Engineering (New York)
 Journal of Environmental Management
 Journal of Environmental Quality
 Journal of Environmental Science and Health. Part A, Environmental
 Science and Engineering
 Journal of Environmental Sciences
 Journal of Experimental Marine Biology and Ecology
 Journal of Fermentation and Bioengineering
 Journal of Food and Drug Analysis
 Journal of Food Protection
 Journal of Food Science
 Journal of Food Science and Technology (Mysore)
 Journal of Freshwater Ecology
 Journal of General and Applied Microbiology
 Journal of General Virology
 Journal of Great Lakes Research
 Journal of Industrial Microbiology
 Journal of Infectious Diseases
 Journal of Japan Society of Air Pollution
 Journal of Maharashtra Agricultural Universities
 Journal of Microbiological Methods
 Journal of Microbiology and Biotechnology
 Journal of Nara Medical Association
 Journal of Natural Products
 Journal of Phycology
 Journal of Plant Nutrition
 Journal of Soil and Water Conservation
 Journal of Soil Contamination
 Journal of Taiwan Livestock Research
 Journal of the Air & Waste Management Association
 Journal of the American Oil Chemists' Society
 Journal of the Chinese Agricultural Chemical Society
 Journal of the Faculty of Agriculture, Kyushu University
 Journal of the Fisheries Society of Taiwan
 Journal of the Institute of Wood Science
 Journal of the Institution of Water and Environmental Management
 Journal of the Japanese Society for Horticultural Science
 Journal of the National Science Council of Sri Lanka
 Journal of the Science of Food and Agriculture
 Journal of the Society of Dairy Technology
 Journal of the World Aquaculture Society
 Journal of Theoretical Biology
 Journal of Toxicology and Environmental Health
 Journal of Tropical Medicine and Hygiene
 Journal of Veterinary Medical Science
 Kasetsart Journal, Natural Sciences
 Korean Journal of Applied Microbiology and Biotechnology
 Korean Journal of Veterinary Public Health
 Korrespondenz Abwasser
 Kraftfutter
 Land Use Policy
 Langmuir
 Latvijas Zinātņu Akadēmijas Vēstis. B Daļa, Dabaszinātnes
 Lebensmittel-Wissenschaft & Technologie
 Letters in Applied Microbiology
 Marine Biology
 Marine Ecology, Progress Series
 Marine Pollution Bulletin
 Material und Organismen
 Meat Focus International
 Meat Science
 Mededelingen van de Faculteit Landbouwwetenschappen, Universiteit
 Gent
 Medical Journal of Malaysia
 Medycyna Weterynaryjna
 Meieriposten
 Mekhanizatsiya i Elektrifikatsiya Sel'skogo Khozyaystva
 Microbial Ecology
 Microbiological Research
 Microbiologie, Aliments, Nutrition
 Microbiology (New York)
 Microbiology (Reading)
 Microbiology and Immunology
 Microbiology Europe
 Microbios
 Mikrobiologicheskii Zhurnal
 Mikrobiologiya
 Milchwissenschaft
 Mitteilungen aus dem Gebiete der Lebensmitteluntersuchung und
 Hygiene.
 Mljekarstvo
 Mokuzaï Gakkaishi = Journal of the Japan Wood Research Society
 Molecular and General Genetics
 Molecular Ecology
 Molochnaya Promyshlennost'
 Molochno-M'yasne Skotartstvo
 Moscow University Biological Sciences Bulletin
 Moscow University Soil Science Bulletin
 Mühle + Mischfüttertechnik
 Mushroom Research
 Mycologia
 Mycological Research
 Mycologist
 Mycopathologia
 Mycoscience
 Mycotoxin Research
 Nahrung
 National Academy Science Letters
 Nature (London)
 Nauka u Praksi
 Netherlands Journal of Agricultural Science
 New Zealand Journal of Zoology
 New Zealand Veterinary Journal
 Nippon Suisan Gakkaishi = Bulletin of the Japanese Society of Scien-
 tific Fisheries
 Obiettivi e Documenti Veterinari
 Onion Newsletter for the Tropics
 ORSTOM Actualités
 Pacific Northwest Cooperative Extension Publication
 Pakistan Journal of Phytopathology
 Pakistan Journal of Scientific and Industrial Research

- Pedosphere
 Periodicum Biologorum
 Philippine Journal of Biotechnology
 PHLS Microbiology Digest
 Phytochemistry
 Phytopathology
 Plant Disease
 Plant Foods for Human Nutrition
 Plant Physiology
 Plantations, Recherche, Développement
 Polish Botanical Studies
 Polish Journal of Environmental Studies
 Poultry Science
 Proceedings of the Japan Academy. Series B, Physical and Biological Sciences
 Proceedings of the National Academy of Sciences of the United States of America
 Process Biochemistry
 Raffles Bulletin of Zoology
 RDA Journal of Agricultural Science, Soil & Fertilizer
 Recueil de Médecine Vétérinaire
 Research and Development Reporter
 Research in Veterinary Science
 Research Report - Agricultural Experiment Station, University of New Hampshire
 Resources, Conservation and Recycling
 Review of Marketing and Agricultural Economics
 Review of Medical and Veterinary Entomology
 Reviews of Environmental Contamination and Toxicology
 Revista Argentina de Microbiología
 Revista Baracoa
 Revista de Biología Tropical
 Revista de Microbiología
 Revista Española de Ciencia y Tecnología de Alimentos
 Revista Iberoamericana de Micología
 Revista Latinoamericana de Microbiología
 Revue de Médecine Vétérinaire
 Rivista di Frutticoltura e di Ortofloricoltura
 Rivista Italiana delle Sostanze Grasse
 Russian Biotechnology
 SA Waterbulletin
 Science International (Lahore)
 Science of the Total Environment
 Sciences des Aliments
 Sciences et Techniques de l'Eau
 Shokuhin Eiseigaku Zasshi = Journal of the Food Hygienic Society of Japan
 SIK Rapport
 Small Ruminant Research
 Soil Biochemistry
 Soil Biology & Biochemistry
 Soil Science and Plant Nutrition
 Soil Science Society of America Journal
 South African Journal of Science
 Southeast Asian Journal of Tropical Medicine and Public Health
 Southern Medical Journal
 Special Publication - Taichung District Agricultural Improvement Station
 Staub Reinhaltung der Luft
 Symposium Series - Society for Applied Bacteriology
 Systematic and Applied Microbiology
 Taiwan Sugar
 Tappi Journal
 Tecnica Molitoria
 Tokyo Noko Daigaku Nogakuba Enshurin Hokoku = Bulletin of the Experiment Forests, Tokyo University of Agriculture and Technology
 Toxicological and Environmental Chemistry
 Toxicon (Oxford)
 Transactions of the ASAE
 Transactions of the Japanese Society of Irrigation, Drainage and Reclamation Engineering
 Trends in Biotechnology
 Trends in Food Science & Technology
 Tropical Science
 Vår Föda
 Vatten
 Veteriner Fakültesi Dergisi (Istanbul)
 Voeding
 Waste Disposal and Water Management in Australia
 Water Environment Research
 Water Pollution Research Journal of Canada
 Water Research (Oxford)
 Water Resources Research
 Water SA
 Water Science and Technology
 Water, Air, and Soil Pollution
 World Journal of Microbiology & Biotechnology
 Yakugaku Zasshi = Journal of the Pharmaceutical Society of Japan
 Zeitschrift für Ernährungswissenschaft
 Zeitschrift für Lebensmittel-Untersuchung und -Forschung
 Zeitschrift für Pflanzenernährung und Bodenkunde
 Zentralblatt für Bakteriologie
 Zentralblatt für Hygiene und Umweltmedizin
 Zentralblatt für Mikrobiologie
 ZFL, Internationale Zeitschrift für Lebensmittel-Technik, Marketing, Verpackung und Analytik
 Zhongguo Shiyongjun = Edible Fungi of China
 Živočišná Vyroba

INFORMATION SERVICES AND PUBLICATIONS

Over 100 scientists/linguists in CABI's Information Services at Wallingford, UK, with help from associated organizations and individuals worldwide, abstract and index the significant research and development literature in agriculture, forestry, aspects of human health, and allied disciplines. Over 12,000 serials and many other publications are scanned, and over 160,000 bibliographic records are compiled each year for input to CABI's main databases, CAB ABSTRACTS and CAB HEALTH. In addition, a current awareness service, CAB Access, provides fast, unrivalled access to the key literature in agriculture and bioscience.

Both CAB ABSTRACTS and CAB HEALTH are available online, and a wide range of information products are derived from them.

ABSTRACT JOURNALS

Printed journals covering broad disciplines as well as specialist interests. Some journals also contain news and other information including review articles. Also available on floppy disk.

CD-ROM

CAB ABSTRACTS on Compact Disc, the CABCD, available back to 1973.

CAB HEALTH - available back to 1973.

CAB SPECTRUM - 10 subject-specific discs containing at least 20 years of information on each of the major disciplines.

CAB COLLECTION - titles combining data from CAB ABSTRACTS with complementary information from other sources.

MAGNETIC TAPES

Organizations with access to mini or mainframe computers may lease all or part of the CAB ABSTRACTS database.

CAB PROFILES

Personalized current awareness profiles based on the most recent input to the database, tailored to individual needs.

ANNOTATED BIBLIOGRAPHIES

Printed or electronic compilations on specific topics.

CAB ALERTS

A monthly current awareness service providing subscribers with the search results from standard profiles.

DOCUMENT DELIVERY SERVICE

Photocopies of originals of most articles included in the database are available from CABI Library Services, Silwood Park, Ascot, UK.

In addition to database products, CABI publishes authoritative reference books, directories, primary journals and serial publications.

PRIMARY JOURNALS

Bulletin of Entomological Research, Seed Science Research, Journal of Helminthology, Soil Use and Management, Outlook on Agriculture and Meat Focus International.

NEWSLETTERS

Authoritative, accurate and up-to-date synopses of current topics reflected in the international media as well as the technical, scientific and medical press.

SERIAL PUBLICATIONS

Index of Current Research on Pigs, Distribution Maps of Pests, Distribution Maps of Plant Diseases, Bibliography of Systematic Mycology, Descriptions of Pathogenic Fungi & Bacteria, Index of Fungi, and Systema Ascomycetum.

BOOKS

CABI has an active book publishing programme and publishes over 60 new titles every year. Some of which are available in electronic form.

Scientific software and reference tools

ANI-CD - An authority file containing approximately 100,000 anthropol names with preferred terms, synonyms, common names, taxonomic positions and bibliographic references.

CABIKEY - An interactive diagnostic key for the identification of insects and other organisms. The first CABIKEY application covers major beetle families.

For further information, contact:

CAB INTERNATIONAL

Headquarters

Wallingford
Oxon OX10 8DE
UK
Tel: (01491) 832111
Telex: 847964 (COMAGG G)
Fax: (01491) 833508

North America

845 North Park Avenue
Tucson, Arizona 85719
USA
Tel: (800) 528 4841
(602) 621 7897
Fax: (602) 621 3816

Asia

PO Box 11872
50760 Kuala Lumpur
Malaysia
Tel: (03) 255 2922
Telex: 28031 (MA CABI)
Fax: (03) 255 1888

Caribbean

Gordon Street
Curepe
Trinidad and Tobago
Tel: (809) 662 4173
Telex: 0294 24438 (CARIRI)
Fax: (809) 663 2859



CAB INTERNATIONAL
Wallingford, Oxon OX10 8DE, UK
Tel: (01491) 832111; Fax: (01491) 833508

THE ORGANIZATION

CAB INTERNATIONAL (CABI) is an international, inter-governmental organization established in 1928. It is owned by its member governments, which currently number 36. The organization is largely self-supporting financially, through the sale of its products and services, and other sources of income.

CABI is dedicated to improving human welfare worldwide through the dissemination, application and generation of scientific knowledge in support of sustainable development, with emphasis on agriculture, forestry, human health and the management of natural resources, and with particular attention to the needs of developing countries.

INFORMATION SERVICES

Scientific and technical information services are provided, derived principally from bibliographic databases built by CABI staff from the world's relevant published literature, with assistance from freelance workers and contracted organizations.

CABI's main databases, CAB ABSTRACTS and CAB HEALTH cover:

agriculture - forestry and forest products - field crops - grasslands - horticulture - crop protection - plant and animal breeding - veterinary science - leisure, recreation and tourism - rural sociology and development - environmental sciences - soils, land and water management - biotechnology - human and animal nutrition - human and animal parasitology - public health - communicable diseases - AIDS - tropical diseases - community health.

Outputs from these databases are distributed in printed form, and in electronic form on diskette, CD-ROM (compact disc) and magnetic tape. Online access is provided by commercial database vendors. These products and services are used by research scientists, teachers and students in higher education, development planners, health workers, and other professionals. Copies of source documents are available through CABI's Document Delivery Service.

CABI also publishes books, primary journals, newsletters and training manuals.

Research and development is undertaken in innovative information systems. Training in information management is offered, especially for developing countries. Advice and practical assistance are given in the design and implementation of science-based information systems, and in the use of modern information technology. Where necessary, partnerships with development assistance agencies are sought to help developing countries acquire the products and services they need.

For further details of all CABI's information products and services see inside back cover.

SCIENTIFIC SERVICES

CABI's scientific services are centred on its four Institutes.

International Institute of Entomology

56 Queen's Gate, London, SW7 5JR, UK, and in the Natural History Museum

International Institute of Parasitology

395a Hatfield Road, St Albans, Herts AL4 0XU, UK

International Mycological Institute

Bakeham Lane, Egham, Surrey TW20 9TY, UK

International Institute of Biological Control

Silwood Park, Buckhurst Road, Ascot, Berks SL5 7TA, UK, with field stations in Trinidad & Tobago, Switzerland, Pakistan, Malaysia and Kenya.

The services provided include:

- authoritative identification of crop pests and pathogens, and parasitic helminths
- survey and diagnosis of plant health problems
- support for integrated pest management and biological control
- biosystematic research on arthropods, micro-organisms, nematodes and helminths
- diagnosis of biodeterioration problems for industry
- research on human mycoses and tropical parasitic diseases
- training, consultancy and advice in all these areas

CABI also provides the Technical Secretariat of the Consultative Group for BioNET INTERNATIONAL, an international cooperative endeavour dedicated to the development of effective biosystematic capabilities and services in developing countries.